

**REFORMING NATURAL RESOURCE POLICIES
IN DEVELOPING COUNTRIES:**

**POLITICS AND FORESTS IN THE PHILIPPINES, THAILAND AND COSTA RICA,
1980-1996**

by

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B.A. History and Literature
Harvard University, 1987

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Doctor of Philosophy in Political Science

ABSTRACT

This dissertation sought to answer the question: under what conditions will advocates for economic efficiency, environmental protection and social equity be able to reform natural resource policies in developing countries? It began by demonstrating that policies governing the use of energy, water, agricultural land and forests in many developing countries are economically inefficient, environmentally damaging and socially inequitable. It argued that political incentives and institutions are the primary cause of these policy failures, and that under most circumstances these incentives and institutions are highly resistant to reform.

It then advanced two propositions to explain why reform is sometimes possible. First, when the economic and financial benefits of resource exploitation decline, status quo beneficiaries may lose interest in defending their privileges, allowing reformers to gain control over what remains of the resource. Second, national crises and political realignments may allow sectoral reformers to form alliances with national political leaders who share their goals. The combined influence of favorable national circumstances and national-sectoral alliances may allow reformers to overcome resistance from status quo beneficiaries.

The dissertation explored these propositions by examining twenty-nine reform attempts in three high-deforestation developing countries during the period 1980-96. The empirical research demonstrated that when the causal factors embedded in the propositions operated, reformers were significantly more likely to succeed in their reform attempts. These factors explained variation in the success of reform initiatives across a wide range of national and sectoral institutions.

Reform advocates in developing countries can draw several strategic lessons from the research findings. The findings also raise a question of theoretical and practical importance for future research: how can reformers who place different priorities on economic, environmental and social goals minimize trade-offs among these goals during the reform process?

Dissertation Supervisor: Eugene B. Skolnikoff
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Chapter 1

Natural Resource Policy Failure: The Problem and Its History

I. Introduction and summary of the argument

In most countries, national policies governing the allocation and use of natural resources are deeply flawed. Throughout the postwar era, most national governments have encouraged or failed to prevent economically inefficient, environmentally damaging and socially inequitable exploitation of natural resources.¹ Across a wide range of political and economic settings, government leaders and favored producers have reaped short-term political and financial benefits from resource exploitation. A variety of social groups, from indigenous peoples to middle class taxpayers, have borne the economic, environmental and social costs.

In both developed and developing countries, natural resource policy failures have deep historical roots. For thousands of years, state control over natural resources has provided rulers with religious and political legitimation, geostrategic power, raw material for economic development, and opportunities for political patronage. Only very recently (since the late 19th century in the U.S. and Western Europe, and globally only since the late 1960s) has state control of natural resources become a source of public concern and criticism.

Many factors have prompted the rise in serious criticism of state natural resource management in recent years. Prominent among them are the intensification of resource extraction in the postwar era, economic shocks that have forced governments to reduce subsidies and increase efficiency in resource use, environmental accidents and disturbing trends that have heightened scientific and public concern over the impact of resource use on environmental quality, and political mobilization of segments of the urban middle class and the rural poor who bear the economic and environmental costs of resource exploitation. These factors are themselves shaped

¹ This chapter focuses on four major natural resource sectors: water, energy (including fossil fuel and biomass fuels), agriculture and forestry. It does not discuss minerals or fisheries. In most developing countries, government policy failures in these sectors encourage the same pattern of inefficient, environmentally damaging and socially inequitable resource use. I have chosen not to review these failures in detail both to avoid repetition and because policy failures in these two sectors have not gained the same level of national or international attention as the four major sectors that are reviewed here. For a review of minerals sector policy failures and their impacts in both developed and developing countries, see Rees (1990: Chs. 4 and 5). For a review of fisheries sector policy failures in Asia, see Panayotou (1985). For an international review of fisheries sector issues, see Loayza (1994).

by broad underlying global trends, including growth in population, incomes, trade, urbanization, environmental assessment capacity, non-economic interest associations, and opportunities for public participation in policy making.

Cross-nationally and cross-sectorally over the past twenty-five years, these factors and trends have operated very unevenly. Consequently, there has been wide variation in resource degradation, political mobilization and state policy response. Overall, however, policy failures have been more severe in countries with weaker institutions for the representation of diffuse interests (e.g. economic efficiency, environmental protection) and politically marginal groups (e.g. the rural poor) in policy making. The welfare costs of policy failure are greater in lower-income countries, which remain heavily dependent on natural resource-based production for subsistence and economic growth. The combination of weak institutions and heavy resource dependence make natural resource policy failures and their impacts most severe in the poorer developing countries.²

Though there are substantial variations in the type and extent of policy failure among the poorer developing countries, critics agree on three broad categories of failure: economic, environmental and social. Economists point to widespread evidence that developing country governments fail to charge users of natural resources for the full economic costs of resource provision, or for the negative externality costs of resource extraction and processing (Repetto 1988a). These failures lead to sub-optimal allocation of resources for society as a whole. Environmentalists argue that governments have generally failed to conserve natural resources for non-extractive purposes, as undisturbed wilderness, sanctuaries and parks. They also argue that the extractive use of natural resources has done serious and in many cases irreversible damage to fragile species and ecosystems, as well as human health (IUCN/UNEP/WWF 1980).

Advocates for social equity have challenged government claims to territories and resources that had been governed and managed by indigenous peoples or long-settled migrants. They have also criticized governments for appropriating land and resources without giving

² In this chapter, the term "developing countries" refers to countries classified as low income and lower-middle income by the World Bank (1997), with the exception of countries in central and eastern Europe and the former Soviet Union. The natural resource management problems of the "transition" or "post-socialist" countries are similar in many respects to those of other developing countries, but their political and economic origins are significantly different. Consequently, some of the historical and institutional arguments I make to explain natural resource policy failure in developing countries are not as useful in explaining the origins of policy failures in the transition countries.

residents a say in resource management decisions, and for "resettling" residents without adequate compensation (Lynch and Talbott 1995). More broadly, they have criticized policies which award control over natural resources to the favored few at the expense of society at large and future generations (Blaikie 1985; Redclift 1987: Ch.7).

Most recently, there has been growing international consensus that in order to correct these policy failures, policy reforms in the natural resource sectors should address them simultaneously and comprehensively. Criticizing natural resource and environmental policy makers for failing to recognize interdependence of economic, environmental and social goals, the World Commission on Environment and Development argued that "sectoral organizations tend to pursue sectoral objectives and to treat their impacts on other sectors as side-effects, taken into account only if compelled to do so... sustainable development requires that such fragmentation be overcome" (1987: 63). Five years later, the World Resources Institute (1992: 38) summarized the international consensus that had emerged by the time of the UN Conference on Environment and Development (UNCED): "Because of these synergistic relationships [among poverty, environmental degradation and unequal access to resources], simultaneously pursuing action on all fronts--investing in the development of people, promoting economic growth, and arresting massive environmental destruction--offers the possibility of turning a vicious cycle into a virtuous cycle."

Since UNCED, a large number of international agencies and developing country governments have stated their commitment to achieve goal integration in the natural resource sectors by enacting and implementing reforms that simultaneously enhance economic efficiency, environmental protection and social equity. Whether and how the worthy goal of integrative policy reform can be achieved in practice is the central question of this dissertation.

This chapter begins by showing that natural resource policies in most countries encourage inefficient, environmentally damaging and socially inequitable resource use, and that these policy failures are generally worse in developing countries (section II). Next, it briefly reviews the historical roots of natural resource policy failure in developing countries, with particular attention to the transformation of state-resource relationships during the era of European colonialism (section III). Finally, it surveys the recent rise of international concern about the economic, environmental and social costs of natural resource exploitation (section IV).

II. Natural resource policy failure: the scope of the problem

Throughout the world, natural resources are commonly exploited in ways that are economically inefficient, environmentally damaging and socially inequitable. Despite an extraordinary rise in global awareness and concern about natural resource management over the past twenty-five years, and significant policy changes in a number of countries, global trends in the management of key natural resources are not encouraging. The following section presents an overview of economic, environmental and social problems associated with the exploitation of freshwater, agricultural land, energy resources, and forests.

A. Freshwater

At the global scale, freshwater resources are abundant, but they are locally scarce in many areas. In theory, freshwater can be reused many times as it cycles from the air into surface streams and groundwater aquifers, but intensive water management is practiced in only a few water-scarce countries, most notably Israel. Water scarcity is expected to become a more serious economic, social and political problem in arid and semi-arid countries and regions over the next several decades (Gleick 1993; WRI 1996: 301-04).

1. Inefficiency

Local water shortages in dry areas are beginning to cause serious economic problems, leading policy-makers and economists to estimate the potential for increasing efficiency in water allocation. Because agriculture dominates water use in developing countries, it has become the focus of efficiency analysis. The World Bank (1992: 100) estimates that irrigation and other agricultural uses account for roughly 73% of freshwater withdrawals worldwide (ranging from 91% in low-income countries to 39% in high income countries). Farmers have few incentives to conserve water, however, since they seldom pay more than 20% of the economic cost of water supply.³ As for municipal use, the World Bank (1993a: 30) estimates that on average, municipal water users in developing countries pay approximately 35% of the average cost of water supply.

³ Repetto (1986: 15) estimates that in the U.S., the world's largest agricultural producer, irrigation system users pay 10-15% of water supply costs. The World Bank (1992: Figure 3.2) found that the governments of several major developing countries (China, India, Indonesia, Mexico, Philippines, Bangladesh), which together account for a majority of the developing world's irrigated agriculture, priced irrigation water at 5-20% of its economic cost.

Developed country governments also subsidize municipal and industrial users, though generally at a lower rate than agricultural users. In both developed and developing countries, most urban water utilities further distort incentives by charging flat or declining rates per unit of water use, rather than rates that rise to reflect increasing marginal supply costs (Tietenberg 1992: 238-40).

2. Environmental Damage

With few incentives to conserve water, users worldwide are depleting the supply and degrading the quality of freshwater resources. Water use has increased worldwide by a factor of four in the postwar era; the rate of demand growth is slowing in high income countries, but not in developing countries (Tolba et al. 1992: 85). The future growth of irrigated agriculture worldwide is now constrained by freshwater availability, not by the availability of potentially suitable land (Tolba et al. 1992: 86). Per capita availability of fresh water in developing countries is estimated to continue dropping for the next twenty-five years (Tolba et al. 1992: 87). Water shortages are increasingly common in populous semi-arid areas around the world, from the U.S. Southwest to the Sahel, the Middle East, South Asia and northern China (WRI 1992: 163). Wasteful agricultural water use has also led to waterlogging, salinization and erosion of agricultural lands. Tolba et al. (1992: 137) cite a UNEP estimate that approximately 30% of irrigated drylands are moderately to severely degraded. Widespread failure to regulate the use of water as a pollution sink has led to serious deterioration in water quality, with impacts on human health, plant and animal species and habitats, and fisheries yields. Increases in pesticide and fertilizer runoff, and discharges of industrial and municipal wastewater, have contaminated major lakes and rivers around the world, although drinking water quality has been improving in both developed and developing countries as a result of investments in sewage treatment (WRI 1992: 161-68).

3. Inequity

The beneficiaries of government water subsidies and lax regulations are disproportionately wealthy. Although agricultural water users are heavily subsidized, small farmers are not the primary beneficiaries of agricultural water policies. Irrigated farmland accounts for only 17% of total farmland (WRI 1994: 294), and its ownership is concentrated in the hands of higher income farmers.⁴ With the exception of irrigation systems, developing country governments have

⁴ The rural poor may, however, benefit indirectly from subsidized irrigation when the expansion of irrigated

provided little water infrastructure for rural residents; in Mexico, where water systems are relatively well-developed, only 49% of the rural population have piped water, and only 12% are connected to sewer systems; in large cities, 90% have piped water, and 73% are connected to the sewer system (Castro 1995: 466). On the other hand, water pricing tends to favor large commercial farmers over urban residents: in the Beijing area, the economic return on urban water use is more than ten times greater than the return on agricultural use, but agricultural users have received preference in water allocation (World Bank 1992: 101). Finally, even in cities with well-developed infrastructure, the urban poor live in slum areas which are not served by municipal water supply systems; they pay private vendors an average of 12 times the amount middle class users pay for the same quantity of piped municipal water (World Bank 1993a: 31-32).

B. Energy

A review of energy resource policies reveals a similar pattern of economic distortions, negative environmental externalities and disproportionate benefits for the wealthy and politically influential. The distortions and impacts are far greater, however, in developing than in developed countries.

1. Inefficiency

Developed countries currently consume slightly more than half of all energy produced globally, and their per capita use is more than nine times greater than that of developing countries (WRI 1996: 274-75). Fossil fuels (coal, oil and gas) account for approximately 85% of developed country energy consumption (World Bank 1992: Fig.6.2). Since the oil shocks of the early 1970s, most developed country governments have encouraged diversification in energy supply by raising taxes on petroleum products. Many have also deregulated domestic energy markets, and introduced incentives for efficiency in production, distribution and end use (McInnes and Unterwurzacher 1991). Currently, energy resources are more-or-less competitively produced and distributed in their domestic markets.⁵

land generates higher demand for labor (Gillis et al. 1987: 313), and when increases in staple crop production cause food prices to fall (Yudelman 1989: 67). Yudelman summarizes the equity impacts of irrigation systems as follows: "Within irrigated areas, the larger producers have gained more than the smaller producers, poverty has probably diminished, but income inequality has probably worsened...some disadvantaged groups will have suffered more than others--for example, female household heads who have no legal rights to water, small farmers who pay discriminately high prices for water, and those who are exploited by tenurial arrangements" (1989: 68).

⁵ Hydroelectric, nuclear and renewable energy sources are not directly tradeable, but investments in these

Developing countries now account for slightly less than one third of world energy use, but they are expected to account for more than half of world energy use by the year 2010 (WRI 1996: 278). Over the past twenty years, developing country energy consumption has nearly tripled, growing more than six times as fast as developed country consumption over the same period.⁶ Fossil fuels supply roughly 60% of primary energy for developing countries; biomass (wood, charcoal, crop residue and dung) supplies 35% (World Bank 1992: Fig. 6.2).⁷

Developing countries have been more successful in expanding production than in allocating energy resources efficiently. In most developing countries, governments have subsidized the capital costs of fossil fuel-based power plants to serve urban industry and consumers, and have subsidized end-user prices for residential and commercial electricity.⁸ Some have also subsidized capital-intensive rural electrification schemes, but these schemes have reached only a small fraction of the rural population and account for a small share of total public investment in the energy sector (Foley 1992). At the same time, many governments have restricted market-based competition in both urban and rural energy markets (World Bank 1993b: Ch.4).

As a result of government subsidies for energy production and use and restrictions on competitive power production, industries and households connected to the urban energy grid have had little incentive to conserve energy. Energy input per unit of GDP has risen by approximately one third since 1970 in developing countries; it has fallen by 20% in developed countries (Tolba et al. 1992: 380-81). Despite a substantial expansion in energy supply over the past twenty years, the combination of rising energy demand, tariffs set too low to recover investment costs, and

resources are indirectly subject to market forces because they must compete with investment in fossil fuel-based energy production. On the other hand, electricity distribution and end-user pricing are dominated by regulated utilities in almost all developed countries. When these utilities are insulated from market forces, they can distort energy production and consumption decisions.

⁶ East Asia has led the growth in energy consumption, followed by Latin America, South Asia and sub-Saharan Africa (World Bank 1992: Table A-10).

⁷ These figures mask large differences in per capita energy use between rural and urban areas, and between poor and wealthy citizens in developing countries. Biomass is the only source of energy supply for virtually all rural residents in the poorest countries, and the primary source of energy supply for poor urban dwellers in most developing countries (Leach 1992; Rosillo-Calle and Hall 1992: 124).

⁸ The World Bank (1992: Fig. 6.3; 1993: 25-28) estimates that in 1988, electricity tariffs in a sample of sixty developing countries averaged 3.8 cents per kilowatt hour, less than one-half of long-run average marginal supply costs. Four out of five utilities failed to cover electricity supply costs, and trends were not encouraging. Tariff rates had been falling for a decade, and rates of return on fixed assets had fallen to 2.8% per year, from a peak of 7.3% in 1985.

electricity distribution networks that routinely lose more than 20% of energy in transmission has led to widespread power shortages in the urban areas of many developing countries (World Bank 1993b: Ch.2). In rural areas, continued dependence on biomass from dung and fuelwood has reduced agricultural productivity by reducing the return of nutrients to the soil and increasing the rate of wind and water erosion in areas previously protected by tree cover. Biomass dependence has also diverted labor from agriculture to fuelwood gathering (Soussan et al. 1992).

2. Environmental Damage

The environmental impacts of energy use vary with the type of fuel, production technology and location. Developed countries have been most directly affected by air pollution (especially particulates and toxic organic compounds) caused by fossil fuel combustion in urban areas. Over the past thirty years, they have achieved substantial reductions in particulate and toxic emissions through a combination of policy and market factors which have slowed energy demand growth, encouraged switching from coal to less polluting fuels, sited power plants outside major urban centers, and increased the use of pollution controls and less-polluting technology in power plants and automobiles (Tolba et al 1992: 11-17). Recently, some developed countries have also begun to slow the growth of carbon dioxide emissions (Reid and Goldemberg 1997).

Developing countries have not achieved comparable reductions in energy-related environmental impacts. In most large cities in developing countries, fossil fuel burning (including burning of biomass for cooking in poor urban households) has contributed to dramatic declines in air quality. Acid rain and ground-level ozone may also be reducing agricultural productivity in rural areas downwind of large cities. Over the past decade some local and national governments have begun to address the environmental impacts of fossil fuel use by requiring pollution control technology and restricting urban driving, but most have failed to address the underlying distortions in incentives for energy use. Consequently, air quality continues to decline in most developing country cities (WRI 1996: 22-23, 66-70, 85-86). In the countryside, biomass fuel gathering contributes to deforestation and loss of soil fertility, and biomass-based cooking is a major source of indoor air pollution (Rosillo-Calle and Hall 1992: 124-36; World Bank 1992: 126). Large-scale hydropower schemes created to supply urban electricity (as well as water and electricity for irrigated agriculture) have inundated agricultural and wilderness areas, reduced

downstream water and sediment flow, and required the relocation of large numbers of people from reservoir areas (Dixon et al. 1990; Goodland et al. 1992).

3. Inequity

Finally, the distributional impacts of energy policies are debatable in developed countries, but rather more clear-cut in developing countries. In developed countries, there are a variety of distributional issues associated with high gasoline taxes and subsidies for particular industries, especially coal (see e.g. Anderson 1995), but there is little evidence to suggest large or systematic transfers across income groups. In developing countries, energy subsidies for urban residential and commercial consumers have brought disproportionate benefits to upper income consumers and private firms. Within urban areas, energy allocation tends to parallel water allocation: the poor are far less likely to be connected to the urban grid, so they pay higher prices on informal markets for biomass and fossil fuels (see the data on fuel use by income category in Leach (1992: Table 3)). Subsidized energy has also imposed substantial pollution externalities on the urban poor, who spend a greater proportion of their time exposed to outdoor air than the wealthy (WRI 1996: 48-52, 87). In rural areas, low and ineffective public investment in energy technologies and institutions has failed to slow the rising economic and environmental costs of energy for the rural poor (deLucia 1994: 2-11).

C. Agricultural Land

Agricultural policies are more complex, and their impacts more diverse, than policies governing water and energy use, but the general pattern of inefficient and inequitable economic interventions with substantial negative environmental externalities is similar.

Globally, productive agricultural land covers 1.5 million hectares, roughly 10% of the earth's land area; an additional 3.6 million hectares is permanent pasture (Tolba et al. 1992: 288). Due to a combination of economic and policy factors over the period 1965-90, world cereal production doubled, while the total area of agricultural land expanded by roughly 6%.⁹ Developing country production rose by 118%, developed country production by 67%. Regionally, however, Asia recorded the largest increases in absolute and per capita production;

⁹ Cereals account for 80% of agricultural area and output (World Bank 1992: 135 and Table A.6).

Latin American production rose more slowly; and African production has actually fallen in per capita terms since the mid-1970s (WRI 1996: Figures 10.1 and 10.2).

Intensification (increases in yield per hectare) accounted for over 90% of the growth in production (World Bank 1992: 134-35).¹⁰ Throughout the world, intensification has been driven by the adoption of high-yield crop varieties and their accompanying "input packages": irrigation, fertilizers, pesticides and machinery (Tolba et al. 1992: 288-97).

1. Inefficiency

The intensification of world agricultural production has been accompanied by large policy-induced economic inefficiencies.¹¹ Both developed and developing country governments intervene heavily in agricultural markets, though their policy goals differ. Developed country governments have intervened to stabilize and raise farmers' incomes. They subsidize agricultural production through a wide variety of input and output price supports and services. The OECD (1994: 103-115) estimates the total value of its members' producer subsidies (the "producer subsidy equivalent") in 1993 at \$163 billion, roughly 40% of the total value of agricultural commodities.

Developing country governments have generally taxed agriculture (both directly and indirectly through overvalued exchange rates and industrial protection policies), seeking to spur industrialization and maintain low domestic food costs. Schiff and Valdes (1992) have conducted the most extensive recent study of agricultural price interventions and their effects in developing countries. They find (Ch.2) that most developing countries have taxed export crops and subsidized import-competing and food crops. Most of the countries that have kept agricultural output prices below market-clearing levels have also provided a variety of input subsidies to increase production levels and encourage the adoption of high-yield varieties (Ch.6).¹²

¹⁰ Despite the overall trend toward intensification, there has been great regional variation in the balance between intensification and expansion of agricultural land: expansion accounted for 47% of growth in yields in sub-Saharan Africa, 30% in Latin America, 14% in South Asia, 6% in East Asia, and only 2% among high-income countries (World Bank 1992: 135).

¹¹ Most recent studies have found that the market failure arguments advanced to justify policy interventions in agriculture no longer hold for either developing or developed countries. Similarly, there is little evidence to support the claim that current policies are helping to achieve social policy goals in either developed or developing countries (*The Economist* 1992b; Schiff and Valdes 1992: Ch. 10; Tyers and Anderson 1992: Ch.6).

¹² As noted above, irrigation subsidies in most developing countries cover 80 percent or more of total water supply cost. Repetto (1988a: 20) cites World Bank and FAO data on fertilizer subsidy levels ranging from 30 to 90 percent of retail cost in a sample of developing countries, with a developing country average of roughly 60 percent. Pesticide subsidies in for a sample of nine developing countries ranged from 20 to 90 percent of retail costs.

The combined impact of developed and developing country agricultural policies on global economic welfare is substantial. Using a global general equilibrium model of world food production and trade, Tyers and Anderson (1992: 219-21) have estimated the total global welfare loss (i.e. the deadweight loss resulting from policy distortions, as distinct from the value of the transfers involved) from developed and developing country agricultural policies at approximately \$100 billion annually circa 1990.

2. Environmental Damage

In both developed and developing countries, agricultural policies that create input and output price distortions have had serious impacts on the productivity of agricultural land, rural ecosystems and human health. In developed countries, price support programs and other subsidies based on volume produced encourage farmers to plant only a few high-value crops, reduce fallow periods and use large amounts of water, machinery, fertilizers and pesticides to boost output. These practices eventually destroy soil organic matter, reduce productivity, and pollute surface and ground water.¹³ Additional problems arise when agricultural lands are adjacent to forests and wetlands. These ecosystems are especially sensitive to pollution by pesticide and fertilizer runoff, and their conversion to agriculture reduces or destroys their value as watersheds, habitats and recreation areas (WRI 1992: 101-108; OECD 1994b: 117-22).

In developing countries, the combination of artificially low output prices and subsidized inputs produces a mixed set of incentives. Farmers with lower quality land, less capital and limited access to government services frequently respond to low price levels by withdrawing from the market into subsistence production. Those with better resource endowments and access to government services are more likely to respond by planting government-favored crops (Bates 1981: Ch.5).

Both withdrawal into subsistence and government-stimulated intensification can have negative economic and environmental impacts. Subsistence agriculture is not necessarily bad for

¹³ Subsidies based on output may also have raised the value of land for farming, encouraging farmers to convert land to agriculture. On the other hand, input subsidies encourage intensification and have probably reduced the rate at which land is converted to agriculture. The net effect of input and output subsidies on land use is therefore ambiguous. In any case, it appears to be small, since the total area devoted to agriculture in developed countries has remained essentially unchanged over the past thirty years (World Bank 1992: Table A.6; WRI 1992: 101). For discussion of the effects of developed country agricultural policies on land use and environmental quality, see OECD (1994: 121-22) and Stavins and Jaffe (1990).

the environment or for agricultural productivity, as long as population density remains low. On the other hand, subsistence agriculture under conditions of increasing population density, rising land costs and declining average plot size forces poorer farmers to reduce fallow times on existing plots. When the productivity of their existing plots drops below the level necessary for a subsistence harvest, farmers who cannot afford to purchase land must open new land in marginally productive areas. These marginal areas may include steeply sloping hillsides, semi-arid plains and logged-over tropical forests. When farming takes place under these conditions, soil productivity is often exhausted after only a few years, forcing migration to new, even more marginal areas (Jazairy et al. 1992: 81-84, 304-10; Keck et al. 1994; Kunstader et al. 1978; Leonard 1989: 25-27). The cumulative effect is a permanent reduction in the agricultural productivity of large areas, with negative externalities including downstream erosion and destruction of wildlife habitat.

Where developing country farmers have responded positively to government subsidies for input-intensive commercial agriculture, the direct environmental impacts have been similar to those in developed countries, though human health impacts due to excessive use of pesticides are probably greater in developing countries (WRI 1994: 114-15; Paarlberg 1992: 310; Farah 1994: 4). On the other hand, intensification that increases the demand for agricultural labor in developing countries may also reduce off-site environmental impacts, by reducing incentives for migration to marginal lands (Leonard 1989: 31-33).

3. Inequity

Overall, national agricultural policies have produced large economic inefficiencies and mixed environmental outcomes. Their equity effects have also been mixed, but there is strong evidence to suggest that in both developed and developing countries, wealthier farmers have benefited disproportionately from government interventions. In some developing countries, agricultural modernization policies appear to have contributed to the impoverishment of segments of the rural poor.

In developed countries, most price supports are based on output, not on income. Therefore, farmers who produce more get larger subsidies. This system has created a self-reinforcing cycle by which the wealthiest farmers gain disproportionately from government policies (Economist 1992a,b; Tyers and Anderson 1992: 207).¹⁴ In most developing countries,

the combination of sectoral bias against agriculture and the concentration of input subsidies on large farmers has left the rural poor, the majority in most low and lower-middle income developing countries, worse off than they would have been without government intervention (Jazairy et al. 1992: 21).¹⁵

In their most comprehensive measure of price distortions, Schiff and Valdes (1992) aggregate the effects of price controls, taxes, subsidies, exchange rate and industrial protection policies for a sample of eighteen countries for the period 1960-83. They conclude (p.142) that these policies resulted in an average annual net transfer of more than 30% of agricultural GDP from the agricultural sector to government and non-agricultural sectors. They also estimate (p.170) that direct and indirect government policy interventions reduced incomes of the rural poor in seventeen of the eighteen countries studied. They also find (p.170) that the urban poor gained marginally (approximately 6% of income) from direct and indirect interventions that reduced food prices, but lost approximately 15% of potential income when the long-term negative impact of agricultural policy on economic growth and urban wages is considered.

In theory, land redistribution to the poor might compensate for the negative income effects of pricing policies. In practice, despite a great deal of rhetoric in favor of land redistribution, and a large body of evidence suggesting that the per hectare productivity of small farms is greater than that of large farms in regions where the cost of labor is low (Tomich et al. 1995: 118-35), substantial redistribution of land from large private landowners to the rural poor has rarely been attempted and has almost never succeeded (Jazairy et al. 1992: 105-20).¹⁶ Rural landlessness in developing countries continues to increase at a rate of over 3% per year, suggesting that

¹⁴ Tyers and Anderson (1992: 207) estimate that the poorest 30% of developed country farmers produce only 10% of total crop output; therefore they receive only 10% of the total value of commodity price subsidies. The Economist (1992a: 23) cites a U.S. Office of Technology Assessment estimate that approximately 135,000 wheat, corn and rice farmers (out of 2.2 million operating farms) received two-thirds of all U.S. agricultural subsidy payments in the mid-1980s.

¹⁵ For African countries, Bates (1981: 55-61) shows that large farmers have benefited disproportionately from both targeted crop price supports and generalized input subsidies. For Latin America, Grindle (1986: Ch.6) shows that income and asset inequality worsened in rural areas between 1960 and 1980 as a direct result of government policies that targeted resources to larger farmers, and absolute incomes for the bottom 20% improved only marginally.

¹⁶ Governments have distributed public lands more often than they have redistributed private lands. Unfortunately, most public land distribution programs have not provided complementary public infrastructure and extension services, so the gains to beneficiaries usually have been small (Jazairy et al. 1992: 123-29).

government agricultural and rural development policies are failing to slow the growth of the group often labeled "the poorest of the poor" (Jazairy et al. 1992: 50).

In sum, agricultural subsidies in developed countries have succeeded in increasing production and maintaining the profitability of agriculture, but at substantial economic and environmental cost, and no significant gain in social equity. In contrast, the overall policy bias against agriculture in most developing countries has discouraged investments in intensification and encouraged the opening of new, marginal lands to farming, while targeted input subsidies have led to intensive farming in irrigated areas, creating some of the same environmental problems that developed countries have experienced with intensive agriculture. Rural incomes have risen in absolute terms in most developing countries, but the poorest have gained the least; in many areas the lot of the poorest has worsened as a result of the commoditization and privatization of land.

D. Forests

The world's total forest area has been declining since the spread of agriculture began ten thousand years ago. Estimates of forest cover before the beginning of settled agriculture are tentative at best, but approximately 5 billion hectares, or 40% of the world's land area (excluding Antarctica) may have been forested (Goudie 1994: 43). Until the end of the Middle Ages deforestation was a gradual process, closely linked with the growth of population and the establishment of city-states in the Near East, China, India, the Mediterranean, and Northern Europe.¹⁷ Roughly one-third of temperate forests and a quarter of subtropical forests, but less than a twentieth of tropical forests, may have been cleared prior to 1800 (Goudie 1994: 43; Houghton 1994: 306-8). Forest logging and clearing accelerated in the sixteenth century, during the first wave of European trade and conquest in the Americas and Asia. European traders and colonial rulers also encouraged (and in many cases forced) forest clearing for sugar, cotton and other high value export crops (Westoby 1989: Part II). By the end of the colonial era, world forest cover had dropped by roughly 1 billion hectares, to approximately 30% of global land area (Goudie 1994: 43).

¹⁷ Though gradual, the cumulative effect of deforestation in each of these regions was dramatic. For example, Greece, Italy, Spain and Britain are all believed to have been mostly forested prior to the rise of classical civilization. Deforestation may have contributed significantly to the loss of agricultural productivity in both the Greek and Roman empires. See Leonard (1985: 23-28), McNeely (1994: 11-13), Westoby (1989: Chs. 8-10).

Over the past fifty years, logged-over forests in virtually all of the developed countries have recovered, due to agricultural intensification, more efficient wood processing, the development of plantation forestry, lower intensity of lumber use, and the falling cost of tropical timber. On the other hand, the area of primary forest (forest not previously subject to large-scale commercial logging) has continued to fall in the world's two largest timber producing countries, Canada and the United States.

In contrast to developed countries, deforestation in the developing countries has accelerated over the last thirty years. The FAO, in the most comprehensive assessments of tropical deforestation available, estimates that deforestation rates rose from 11.1 million hectares a year in the 1970s (cited in Grainger 1992: 129) to 15 million hectares a year in the 1980s (FAO 1993: 25).¹⁸ Although "population pressure" is often cited as a primary driver of tropical deforestation, the causes are more complex. In most developing countries, government policies have created strong incentives for harvesting tropical hardwoods at unsustainable rates, clearing logged-over forests for subsistence agriculture, and converting forests to commercial agriculture and pasture (Grainger 1992: Chs.2 and 4).

1. Inefficiency

Forest recovery in developed countries has occurred despite government protection of wood processing industries and subsidies on logging in log-exporting countries. Most developed countries are net importers of forest products; an important subset import raw logs or sawnwood and export finished wood products. Those who import logs, particularly the European Union countries and Japan, have imposed escalating tariffs that protect their domestic wood products industries.¹⁹ These escalating tariffs raise the cost of wood products to domestic consumers and discourage wood exporters (particularly in developing countries) from investing in value-added processing (Repetto 1988b: 26-28).

Two developed countries, the U.S. and Canada, have major logging industries as well as wood processing industries. In both countries, the logging industry has been heavily subsidized. The U.S. Forest Service provides infrastructure and forest maintenance services for private

¹⁸ Estimates of global rates of tropical deforestation are highly sensitive to the definition of tropical forest, the definition of deforestation, the accuracy of underlying data and the methods used to interpolate missing data. See Grainger (1992: Ch.5) for an excellent summary of estimation issues.

¹⁹ Escalating tariffs are set low for unprocessed, higher for processed, and highest for finished products.

contract-holders. Its fees are set so low that private timber companies reap large windfall profits; in most regions fees fail to cover Forest Service operating costs (Repetto 1988c: 376-79). In Canada, the logging industry is concentrated in the old growth forests of British Columbia (OECD 1995: Fig. 8.1). Despite a number of attempts at reform, logging fees have remained low, and harvesting and reforestation requirements have not been sufficient to ensure continued sustainable yield (Haley and Leitch 1992).

Reacting to these developed country policies, developing country governments have tried to enact countervailing incentives in their logging and wood products industries. Several recent studies (Repetto and Gillis (1988); Mahar (1989); Grut et al. (1991)), have shown that developing country governments subsidize commercial logging and wood processing. Most developing country governments with commercially valuable forests have awarded logging concessions to private firms at prices that fail to capture more than a fraction of the scarcity rent (the supernormal profit accruing to the owner of a scarce resource).²⁰ In Indonesia during the early 1980s, the windfall profit to concessionaires exceeded \$500 million per year, in an industry where many concession holders had been awarded their concessions as political patronage with virtually no equity investment (calculated from Gillis 1988: Tables 2.17, 2.19; Ross 1996: Ch. 5). Governments have almost always failed to collect reforestation charges or enforce reforestation regulations, so concessionaires have rarely paid the cost of replacing the trees they cut. In order to encourage the development of domestic wood processing industries, several major producers (Indonesia, Philippines, Brazil, Ghana) have banned or heavily taxed the export of raw logs while subsidizing capital investment in wood processing and exports of processed wood.²¹ With few exceptions, domestic processing industries created under these conditions have failed to become economically competitive on international markets (in part because of escalating tariffs in

²⁰ Because timber is a scarce natural resource, its market value is generally greater than the cost of "producing" it. Those who harvest the tree do not pay the cost of growing the tree, nor do they create the market price that the resource commands by virtue of its economic value and limited availability. (See Gillis et al. (1987: 527-32) for a discussion of the definition and measurement of resource rents.) By definition, realized rent that is not taxed by the state accrues to those who sell the resource as windfall profit. Repetto (1988a: 18-21) reports that with the exception of the Malaysian state of Sabah, no government of a major tropical timber exporting country captured more than half of timber rent during the early 1980s.

²¹ In part, developing country governments have justified their subsidies for wood processing as a response to developed countries' protective tariffs on processed wood. Both groups could gain economically if developed countries eliminated the tariffs and developing countries eliminated the subsidies, and some progress in this direction was made in the Uruguay Round negotiations on natural resources, but the final agreement leaves room for continuing intervention by both importers and exporters (Schott 1994).

developed countries), and have continued to rely on abundant supplies of raw logs and government subsidies to maintain profitability (Repetto 1988a: 26-31).

In developing countries with sparsely populated forest areas, government policies that encourage the conversion of forest to agriculture and ranching create even greater economic distortions. Most governments with large areas of tropical forest have encouraged the conversion of forest land for agriculture and/or livestock raising. In Asia, the governments of Indonesia, Thailand and the Philippines have subsidized forest conversion for the resettlement of the landless, poor farmers, pardoned rebels and others (Lynch and Talbott 1995). In Latin America, the governments of Brazil and several Central American countries have subsidized the capital cost of converting forest to pasture, primarily to raise cattle for the North American market (Browder 1988, CCAD 1991: 17-20; Downing et al 1992; Mahar 1989; Utting 1993). Brazil has also funded settlement schemes in the Amazon as part of large-scale mining and agricultural development projects (Browder 1988: 278-83).

In countries with substantial forest resources, subsidies for logging, wood production and conversion of forest to other uses have raised rates of forest degradation and conversion far above economically efficient levels.²² In the United States in the early 1980s, approximately 40% of all timber rights in the best-stocked national forests were sold at a price lower than the cost of managing the forest for timber production; economic losses during the late 1970s and early 1980s averaged roughly \$80 million annually (Repetto 1988c: 377-79).²³

Government policies encouraging logging and forest conversion have been even more costly in developing countries, both because economic distortions tend to be greater and because tropical forests are far less productive in physical and biological terms once converted to alternative uses. Repetto et al. (1989: 6) estimate that deforestation in Indonesia, if accounted for as asset depreciation, reduced Indonesia's net national product (NNP) by an average of roughly 5% per year during the period 1971-84. Similarly, a study of Philippine deforestation (USAID

²² Logging is economically efficient when the economic value of logs is greater than the economic costs of producing them. Deforestation is economically efficient when the net present value of the goods and services produced by land under forest cover is less than its value in alternative uses. In most cases, logging and forest conversion have not met these tests.

²³ Comparable quantified estimates of economic costs are not available for Canada, but recent changes in British Columbia's forest policy suggest that losses have been large. In 1994 the province passed a law raising logging fees by 80%, and allocating C\$2 billion in environmental protection and reforestation (Environment Canada 1995). These recent reforms suggest that the logging industry's previous operations have been highly subsidized as well as environmentally damaging.

1991: Table 3) estimates that excessive logging and forest conversion reduced NNP by at least 0.4% per year in the 1970s, and by 0.2% per year in the 1980s.²⁴ Browder (1988: 270-71, Tables 6.11 and 6.12) estimates that the net present value of conversion of forests for cattle ranching in the Brazilian Amazon was sharply negative. Under the government's ranching program, the average ranch cost the Brazilian economy almost \$3 million over its fifteen year operating life, while deforesting nearly ten thousand hectares. The total economic loss from the ranching program during the period 1964-83 exceeded \$1.2 billion. Beyond the direct costs of forest loss, there are many indirect costs which are harder to monetize but which may be as large or larger. Prominent among them are reductions in agricultural production downstream of deforested watersheds due to accelerated soil erosion and exaggerated flood-drought cycles,²⁵ shortened operating lifetimes for dams (and therefore higher unit costs for water and power supply), and loss of income from non-timber forest products.²⁶

2. Environmental Damage

Forest degradation and deforestation have damaged the environment as well as the economy in both developed and developing countries. The magnitude of environmental impacts varies widely depending on the type of forest, the underlying soil and topography, the degree of degradation, the size of the area deforested, the use of deforested land, and a host of other variables. Tropical

²⁴ These estimates are part of the ongoing effort to incorporate the value of depletable natural resources (both renewable and non-renewable) into conventional national income accounting, and should be interpreted as preliminary rather than definitive findings. For further discussion of natural resource accounting methods and their current development, see El-Serafy and Lutz (1989), Repetto et al. (1989), Hammond et al. (1995: 23-26 and Appendix 1), and World Bank (1995: Chs. 7 and 8).

²⁵ Panayotou and Parasuk (1990: Ch. 4) estimate that conversion of forest land to agriculture had cost the Thai economy roughly \$36 per hectare (in 1990 dollars) over the period 1962-87; conversion had generated net gains up until the late 1970s, then turned sharply negative in the 1980s. Roughly fifteen million hectares were converted during this period, so the total cost to the Thai economy would have been on the order of \$5.4 billion, or \$220 million per year.

²⁶ Lampietti and Dixon (1994) carefully review the literature on the non-timber economic benefits of standing forests. Based on reported results from other studies, they estimate (pp.19-21) that the median annual benefit (including extractive uses (e.g. timber and non-timber products), non-extractive uses (e.g. watershed protection, carbon sequestration and recreation) and preservation (e.g. citizens' willingness to pay taxes to preserve an area for current and/or future generations)) from a hectare of standing forest in a developing country is approximately \$220. Of this total benefit, timber accounts for half, non-timber forest products for a third, non-extractive value (primarily watershed protection) for 10%, and preservation value for the remaining 7%.

The authors do not include carbon sequestration value in their calculations, but note (p.20) that if a market for carbon sequestration did exist, it could increase the value of a hectare of forest by up to 50%. This value is of course highly sensitive to changes in the estimated damage associated with carbon emissions, currently an area of major uncertainty in climate change research.

deforestation is of particular concern because the tropical forests contain a disproportionate share of the world's biological diversity, and because their underlying soils are dramatically less productive once the forest cover is eliminated.²⁷ In both tropical and temperate forests, deforestation eliminates habitat and ecosystems, leading to loss of genetic diversity and (particularly in tropical forests) species extinction.²⁸ When deforestation opens the forest canopy, it exposes forest soils to rainfall, harming soil fertility and increasing soil erosion rates. Soil erosion and the reduction in water retention by trees cause sedimentation and increase nutrient levels in freshwater and riparian ecosystems, disrupting species feeding and breeding patterns. The loss of water-regulating capacity also increases the risk of flood and drought. Finally, tropical deforestation may be contributing to global climate change via the burning of trees and the loss of carbon-fixing in standing biomass (Goudie 1994: 47-50, 162-65, 197-200, 226-27; Grainger 1992: Ch.6).²⁹

3. Inequity

As in other natural resource sectors, government forestry policies have usually concentrated benefits on a small set of government and private actors. Government officials have given forest exploitation rights, subsidies and regulatory exemptions to private commercial interests, who have returned the favor in the form of financial and political support. The economic and environmental costs of these policies have been borne by indigenous people and settlers whose access to forest land and products has been restricted, by downstream residents and producers whose water supplies have been disrupted, by taxpayers who pay the cost of subsidies for logging and forest conversion, and by the global community (including present and future generations) which has

²⁷ Tropical forests account for only 7% of the world's land area, but contain at least 50% of all species (WRI 1992: 130). Their trees, not their soils, provide most of their ecosystem functions (habitat provision, water and nutrient cycling). Once the trees are felled, the habitat functions are destroyed and the exposed soils tend to erode quickly, leaving large areas of physically and biologically unproductive scrub (Grainger 1992: 155-57).

²⁸ Estimates of the species loss due to recent deforestation range widely, from Myers (1979) estimate of one species per day, to E.O. Wilson's (1989) estimate of fifteen per day. Reid and Miller (1989) estimate that tropical deforestation over the period 1990-2020 could lead to the extinction of 6-14% of all species in Africa, 7-17% of all species in Asia, and 4-9% of all species in Latin America. The ranges represent different assumptions about deforestation rates. The low-end estimate reflects a continuation of current rates; the high-end represents an increase to double current rates. There are also a number of underlying assumptions about the number of species in tropical forests, and the relationship between loss of forest habitat and species extinction.

²⁹ There is some evidence linking deforestation to localized climate change, particularly decline in rainfall and higher local temperatures, but there has been little systematic study of micro-climate effects of deforestation. Current regional climate models indicate that the temperature and rainfall effects of deforestation are highly sensitive to initial assumptions (Goudie 1994: 317-18; Grainger 1992 163-64).

lost some of its opportunity to exploit the biological diversity of the forests, and may have to adapt to climate change caused in part by forest degradation and deforestation.

Among developed countries, there is a long historical record of state and private appropriation of forest access and use rights. In Europe, the princely states that emerged from the fifteenth to the nineteenth century often claimed common lands, including forests which had previously been managed as common property by peasant villages, as sources of revenue and recreation. Princes and kings then awarded forest rights to members of the military and commercial elite in exchange for military service and payments to the state treasury; "encroachment" and "poaching" by peasants were brutally punished (Westoby 1989: Ch. 11; Thompson 1975: 240-45). In Canada and the U.S., the European settlers and their governments asserted control over forests by expelling or exterminating indigenous inhabitants. The majority of commercially valuable primary forest in both countries has remained under the control of the state up to the present. Although both governments espouse "multiple use" policies for the national forests (i.e. forests should be used not only for commercial logging, but also recreation and environmental conservation), most commercially valuable primary forests have been logged rather than preserved, and the primary beneficiaries have been large logging companies.³⁰

In Latin America, Africa and Asia, European colonial powers also claimed forests for the state at the expense of indigenous peoples and pre-colonial states, expelling or annihilating those who resisted (Wolf 1982; Ponting 1991: Ch. 7). Forests were logged for ship and construction timber and then cleared for export agriculture. Post-colonial governments have continued and extended state control of forests, and have continued to support commercial logging and conversion for export agriculture. Consequently, the benefits of forest use continue to be concentrated on multinational and domestic logging, agribusiness and livestock ranching firms (Colchester 1993; Guppy 1984; Ledec 1985).

Most developing country governments have continued to use forests as sources of export earnings and political patronage, but some have also attempted to distribute public forest land as a

³⁰ Repetto (1988c: 373-77) found that in the U.S. during the 1970s and early 1980s, large companies (those with over 9,500 employees) reaped most of the benefits from subsidized timber sales, and that the economic benefits to most "logging communities" (i.e. counties with large logging and wood processing operations) from logging jobs and revenue-sharing payments amounted to less than 1% of employment and income. There does not seem to be a comparable statistical study for Canada, but case studies (e.g. De'Ath and Michalenko 1993) suggest that most indigenous people and local residents have not benefited from logging operations.

"safety valve" for landless peasants and the urban poor. Brazil and Indonesia have undertaken the largest forest conversion and settlement programs, but many other states with large expanses of tropical forest and high population densities, including the Philippines, Thailand, Malaysia, Cote d'Ivoire, Bolivia, Ecuador and Mexico have also responded to land hunger by allowing or encouraging the conversion of forest lands to small scale agriculture (Jazairy et al. 1992: 13-26). In most cases, however, the forest allocated for settlement has been of low commercial value, has already been logged, and/or has already been "encroached" by migrants. Governments have also failed to provide adequate infrastructure, extension or marketing services for most agricultural settlement schemes. Settlers have responded by planting staples and using techniques poorly suited to tropical forest conditions, exhausting the soil and clearing adjacent forest. Thus the overall pattern of forest policy in developing countries remains one of profitable exploitation by political and economic elites, with externalities borne by the rural poor and urban taxpayers.

III. Natural Resource Policies in Historical Perspective

Why have developing country governments so consistently pursued policies that lead to uneconomical, environmentally harmful and inequitable use of natural resources? And why have these policies become the subject of scrutiny, criticism and reform efforts in recent years? To answer these questions, we must examine both the history of the relationship between states and natural resources and more recent changes in the analysis and politics of natural resource exploitation in developing countries.

A. States and natural resources

From the earliest city states in Mesopotamia, the Indus Valley and China to the Mediterranean civilizations of Greek and Rome, the Mayan empire, the princely states of early modern Europe, and the pre-colonial monarchies of Asia, there has been a close connection between the concentration of coercive authority and political legitimacy in the state, the intensity of resource exploitation, the reallocation of natural resources as political patronage, and the undermining of the resource base.³¹

³¹ Ponting (1991: Chs. 5 and 6) makes this argument using all of the civilizations named above as supporting examples. He also draws heavily on Carter and Dale (1975). On Mesopotamia, see Weiss et al. (1993). On the Indus Valley, see Hughes (1975). On China, see Elvin (1973) and Bilsky (1980). On Greece and Rome,

Most states have followed a trajectory that begins with settlement and the creation of agricultural surplus, followed by an increasingly elaborate division of labor and authority, concentration of power in a ruling elite, wars of territorial expansion and defense, increasing pressure on the ruling elite to reallocate the land, labor and revenue under their control as patronage for their military and economic supporters, followed by increasing pressure to extract surplus from the remaining human and natural resources under their direct control, and eventual decline due to a combination of resource degradation, elite and popular revolt and/or external invasion. This schematic presentation is not meant to imply that natural resource exploitation, or material factors in general, have been the primary causes of the rise and decline of civilizations. Non-material factors and historical contingencies clearly play equally important roles. Nevertheless, several recent studies have argued that there is a broad historical pattern in which states concentrate control over human and material resources, transform this control into military power and economic productivity, and expand until they reach a point at which their political reach exceeds the resources in their grasp. At this point, rulers may attempt to squeeze greater production out of the resource base. Unfortunately for them, the coercion needed to increase production makes them increasingly vulnerable to internal revolt, and the diffusion of technological and institutional innovations that allowed them to concentrate power in the first place makes them increasingly vulnerable to external invasion.³²

Long-lived states have been more successful at maintaining the agricultural productivity of homeland areas, and have used non-agricultural production and trade as complements to territorial conquest (Gilpin 1981: 188-91; Leonard 1985: 38). Nevertheless, pressure on peasants to increase yields from existing plots, along with the conquest and settlement of lightly populated

see Meiggs (1982). On the Maya, see Culbert (1973). On the Incas, see Leonard (1985: 24). On the European princely states, see Maczak and Parker (1978) and Tilly (1975: 19-24). On pre-colonial Asia, see Geertz (1963).

³² See Braudel (1984: 85-88); Gilpin (1981: Chs. 3 and 4); Kennedy (1987: xx-xxv; 438-40). Braudel's unit of analysis is the "world-economy" centered on a core trading city and its government. To explain rise and decline, he places the greatest emphasis on shifts in resource availability and trade patterns that are only indirectly the result of state policies. Similarly, Kennedy argues that states decline because economic dynamism (a function of resource control and technological innovation) shifts from the leading state to one or more of its major challengers; political events, particularly major power wars, tend to follow and confirm economic and technological changes. Gilpin's argument is the most complex, embracing material, political and cultural causes of expansion and decline. He notes (pp. 159-68) that premodern states began to decline when they overreached the limits of the territory they could control. These limits were a function of the geographical, technological and institutional balance of power on the frontier, and of the administrative arrangements for extracting resources from the territory as a whole. At this stage, political and military elites usually reacted by extracting resources for warfare and consumption at unsustainable rates.

fertile lands, have been the dominant natural resource "policies" of most states throughout recorded history.

B. The impact of European colonialism

The era of European conquest--from the sixteenth century Portuguese and Spanish colonization of the Americas through the creation of the British empire, to the late nineteenth century race for Africa--was in many ways simply a new cycle of state expansion, but on a global scale. The key differences between European colonialism and previous cycles were technological and institutional. Europeans conquered easily because they had evolved much more sophisticated weapons and military organizations than most of the peoples and states they faced.³³ They extracted plant, animal and mineral resources at unprecedented rates by using agricultural and engineering technologies developed in Europe; scientific experimentation for improving crop production; and a combination of public administration and private property institutions that appropriated land, coerced labor, and rewarded capital investment more effectively and on a wider scale than had ever been achieved before (McNeill 1963; Rosenberg and Birdzell 1986).³⁴

Until the early nineteenth century, most of the resources extracted from the Americas and Asia were luxury goods: sugar and precious metals from the Caribbean and South America, tobacco from the British American colonies, furs from the North American interior, tea from Ceylon, spices from Indonesia. Cereal and root crops from the Americas--potatoes, maize and cassava--were transplanted to Europe, where they provided "the most valuable single addition to the food-producing plants of the Old World since the beginnings of agriculture" (Crosby 1972: 170, cited in Cohen 1995: 43). Together, luxury goods, specie and new crops provided European states and societies with capital for investment as well as goods for consumption. At the same time, agricultural advances and the end of the "Little Ice Age" in Europe stimulated rapid population growth. During the nineteenth century, as the Industrial Revolution transformed first the British and then the world economy, the colonial territories became sources of land for

³³ The Ch'ing dynasty in China and the Mughal empire in India were the most notable exceptions; they were brought under European control more slowly, through diplomacy and trade as well as force. On India, see Wolpert (1982: 213-230). On China, see Hsu (1975).

³⁴ McNeill later (1976) pointed out that chance also played a major role in Western conquests; infectious diseases from the Old World did far more damage to the indigenous peoples of the Americas than did the Spanish *tercios*.

settlement (roughly 50 million Europeans emigrated during the period 1830-1920, most to the Americas, Australia and New Zealand), agricultural goods (wheat, meat and fruit from the Americas and Australia, rice from Southeast Asia) and industrial raw materials (primarily cotton, rubber, and vegetable oils). By the eve of the First World War the major European states had decisively overcome their internal natural resource constraints by making more productive use of their own resources and by exploiting the resources of the entire world (Ponting 1991: Chs. 7 and 10).³⁵

As important as the resources of the Americas, Asia and Africa were for Europe, colonialism arguably had a greater impact on the colonies' economic development and natural resource policies than on the metropolises'.³⁶ Colonial administrations supplanted pre-colonial states, established centralized bureaucracies to own or manage natural resources for the benefit of the colonizing state, and created local administrative elites to staff them. They coerced labor directly and through taxes to force peasants into the cash economy, and required that large areas of agricultural land be allocated for the production of export cash crops. They established or formalized state control over forests, minerals and water. They invested in public health measures (e.g. sanitation, swamp drainage, food inspection) that facilitated rapid population growth.

In all of these ways, colonial conquest dramatically changed the relationship between states and natural resources throughout Asia, Africa and Latin America.³⁷ It heightened the coercive power and institutional autonomy of the state relative to local social groups, made the export of natural resource products a primary objective of state policy, and created close links between government agencies and private, primarily foreign-owned firms engaged in natural resource-based production and extraction. It also undermined--and in many cases destroyed--indigenous institutions for the management of land, livestock, game, forests and water.³⁸

³⁵ In 1914, Britain imported 80% of its wheat, 65% of its fruit and 40% of its meat consumption (Ponting 1991: 245).

³⁶ The following comments pertain primarily to the states and peoples of Latin America, Asia and Africa. In the white settlement territories of North America, Australia and New Zealand, settlers had much greater autonomy to make resource management decisions that benefited the local as well as the colonizing state's economy.

³⁷ This is not to suggest that pre-colonial states were less motivated to extract agricultural surplus, or that they were more committed to resource conservation. Pre-modern rulers in Africa, Asia and Latin America frequently established royal monopolies over valuable natural resources and coerced peasants to produce surplus. In most cases, however, they had not developed coercive and extractive institutions as sophisticated as those of the European colonial powers (Wolf 1982: Ch.2).

³⁸ Colonial administrations generally asserted blanket claims over whole territories and types of resources, and disregarded or explicitly voided pre-existing claims and systems of customary law for resource management.

These impacts of colonialism on state-resource relationships varied across countries, depending on the intensity and duration of colonial exploitation, itself a function of the value of the territory and its resources to the colonial power and the degree of local state and social resistance to exploitation.³⁹ In Latin America, the wars of independence in the first half of the nineteenth century freed local European-descended elites from the direct control of Spain and Portugal, but three centuries of colonial occupation had already decimated indigenous populations and traditions. Latin American societies, economies and states remained heavily dependent on resource extraction and export and strongly influenced by foreign capital and markets (Grindle 1986: Ch. 3; North 1990: 102-03).

Asia was colonized later, and in most cases with less disruption to its pre-colonial societies and states.⁴⁰ British India, the Dutch East Indies and French Indochina were hybrid states, in which pre-colonial rulers, nationally-chartered trading companies, and colonial administrators all jockeyed for control of resources (Crouch 1985). By the mid-19th century, however, direct colonial administration had been established in all three, and a century of intensive resource extraction followed. Japan, Thailand and China escaped colonial control, but both Thailand and China were forced to concede control of valuable natural resources to colonial powers.⁴¹

Sub-Saharan Africa was colonized latest, after a period of several hundred years in which Europeans had exploited the continent's human resources through the slave trade.⁴² Though the

On Latin America and the Caribbean, see Davis (1973: 49-50, 163-64, 257). On Africa, see Freund 1984: Ch.6). On Asia, see Lynch and Talbott (1995: 32-34).

³⁹ I am not arguing that colonial powers impoverished their colonies. The evidence on this point is decidedly mixed (see Gilpin (1987: Ch.7) for a succinct review of the dependency debate). I am arguing that colonization changed both the organization of the state and the economics of natural resource use. These changes accelerated economic growth in many colonies, but colonial powers and chartered companies often did not reinvest the proceeds of exploitation to maintain the productivity of the resource base. Consequently, colonial commodity markets were as susceptible to boom-bust cycles as international commodity markets are today (see e.g. Davis 1973: 260-63).

⁴⁰ The Philippines was a notable exception. Prior to the beginning of Spanish colonial rule in the early 16th century, Philippine society was organized on clan and village lines, with no centralized state. Spanish colonialism created the first state superstructure in the archipelago. The Spanish Catholic church transformed society spiritually through widespread conversion to Catholicism, and economically through the system of landholdings owned by the Church and farmed by Philippine tenants. See Steinberg (1994: 56-62) and Wurfel (1988: 4-5).

⁴¹ Britain demanded and received timber concessions in Northern Thailand; France gained control of fertile agricultural land on the upper Mekong (Pragtong and Thomas 1990). In China, Britain and other colonial powers dominated an increasingly unequal trade in silk, spices and textiles, and siphoned off most customs revenue. The Ch'ing dynasty responded by increasing its revenue demands on the peasantry, accelerating the ongoing process of agricultural land degradation (Moore 1966: 218-220).

⁴² South Africa was the exception. Dutch Huguenots fleeing religious persecution under the Hapsburgs settled in coastal areas after 1650, and the Dutch East India Company soon followed to exploit the region's wildlife

period of direct colonial administration in Africa was relatively short, European colonial institutions were at the peak of their technological and institutional sophistication when they controlled Africa. Although African populations survived the onslaught in much greater numbers than did the indigenous peoples of the Americas, their societies and elites were less successful in maintaining autonomy than those of Asia. As a result, the African colonies experienced a rapid and profound reshaping of state-resource relationships. In a matter of decades, small and weakly institutionalized states whose peoples practiced settled and shifting agriculture, pastoralism and hunting over large areas with complex systems of customary rights were transformed into centralized administrations governing fixed territories. These administrations directed and appropriated land and labor for the production of a small number of export agricultural crops, minerals and timber. The overall impact on African societies, states and resources from less than a century of colonial rule was arguably at least as great as the impact of three hundred years of less-intensive exploitation in Asia and the Americas (Freund 1984: Ch. 6; Whitaker 1988: 35-42).

IV. National Development and Natural Resources in the Postwar Era

A. Development strategies and natural resources in post-colonial states

As Asian and African colonies attained independence after the Second World War, they found themselves in a position similar to that of the Latin American countries a century earlier. Political independence did not transform either state-society or state-resource relationships. In their quest to reduce the political and economic influence of the former colonial powers, post-independence elites generally discovered that their economies, government agencies and civil servants were highly resistant to change, that they remained heavily dependent on expatriate advice and technical assistance for both political and economic development, and that the willingness of their people to sacrifice for the sake of national liberation could not be sustained for long after the initial euphoria of independence (Huntington 1968: Ch.1).

In the 1950s and early 1960s, the economic development strategies of most developing country governments were sharply constrained by the lack of financial and physical capital, skilled

(especially for ivory, skins and feathers) and minerals. These settlers and enterprises controlled much of the interior by the time the British took possession and began large-scale settlement in the mid-19th century (McCormick 1989: 8).

workers, and well-developed markets outside the primary commodity export enclaves established by the colonial powers. Nevertheless, encouraged by the historical example of Japan's industrialization and the consensus of developed country economists, most developing country governments in the 1950s and 1960s pursued strategies of state-led industrialization. The aim was to escape from the "commodity trap" of primary exports by building up industrial sectors whose high profitability would more than compensate for the high capital costs of their establishment. As the Green Revolution package of technologies for intensive food production became available in the same period, many developing country governments added food self-sufficiency as a key economic development goal, complementary to rapid industrialization. Intensification and commercialization of domestic food production would reduce both poverty and trade dependence, and would stimulate input and output markets for industrial goods (Hirschman 1958; Lal 1985: Chs. 3 and 4; Rostow 1960).

The most obvious constraint on the industrialization and agricultural intensification strategy was the lack of domestic savings needed for capital investment. Developing country governments sought to overcome this obstacle in two ways: by extracting more revenue from their natural resource-based sectors, and by seeking foreign loans and direct investment for industrial development. In time, they expected that "backward" and "forward" linkages (i.e. the formation of domestic markets for industrial inputs and products) from heavy industries and commercial agriculture would stimulate domestic capital formation and the growth of a skilled labor force, improve their terms of trade and create sizable domestic markets, overcoming the colonial legacy.

The industrialization strategy gave new legitimacy to natural resource exploitation, and it intensified pressure to manage natural resources for short-term financial gain. No longer were natural resources to be extracted by foreign powers on unfair terms to serve foreign interests. Now they were to be extracted by the state and domestic firms. Foreign firms would participate only to facilitate the transfer of capital, management expertise and advanced technology to developing countries. Regardless of the division of responsibility among public and private, domestic and foreign partners, the state would capture the lion's share of the profits from natural resource exploitation and invest them in industrialization.

This strategy did not reduce demands on natural resources. On the contrary, it justified intensified natural resource extraction, so that the state and private enterprise could rapidly accumulate capital for investment in industry and produce large quantities of food. Persistent institutional and economic constraints further amplified the emphasis on short-term financial profitability. The close ties among political leaders, government agencies, domestic and foreign investors; the urban bias of economic development policies; the marginal role of rural smallholders; and continuing government dependence on trade for tax revenue, meant that natural resources continued to be managed primarily for their export earning potential and secondarily for domestic commercial sale. Other goals, most importantly conservation of the long-term productive capacity of the resource base and the allocation of natural resources for the immediate benefit of the rural poor, were far less salient in policy formulation, and glaringly absent in implementation.

B. Rising concern about policy failures in developing countries

Concern about overexploitation of natural resources is not new, but until very recently those advocating conservation have been government officials, and their primary concern has been to maintain and expand physical production. Though scholars and enlightened members of the political elite have studied and worried about the broader environmental, economic and social impacts of natural resource use for millennia, these impacts were not subjects of systematic study and advocacy until the nineteenth century. With few exceptions, they have only become major issues on national policy agendas since the 1960s. The initiation, organization and political impact of advocacy for environmental, economic and equity goals in natural resource use has varied greatly across countries and sectors, but some broad trends can be identified.

1. The rise of concern: from developed countries to developing countries

In the developed countries, non-government environmental groups had only marginal influence on natural resource policy until the 1960s. Then, over a single decade, rising public concern about environmental quality stimulated the formation of a new generation of environmental advocacy groups. These groups pushed environmental protection to the top of resource management policy agendas and achieved partial integration of environmental criteria in resource policy-making.⁴³ In

contrast, concern for economic efficiency in resource use did not figure prominently in policy-making until the economic downturns of the 1970s, and government officials continue to be the primary advocates for efficiency, with some support from fiscally conservative political parties and taxpayer organizations.⁴⁴ Demands for social equity have been more variegated across sectors and countries, with a long history in European agriculture, a more recent one in indigenous peoples' demands for the return of their ancestral lands in North America and Oceania, and little sustained activism or policy development in the energy, water or forestry sectors (except as an element of indigenous peoples' claims).⁴⁵

The general rise in environmental, efficiency and equity concerns in developed countries, and their translation into policy advocacy in the natural resource sectors, have had many important "spillover" effects in developing countries. On the other hand, differences in developing countries' economic conditions and domestic institutions have led to important differences in the organization and influence of advocates for efficiency, environmental and equity goals. In particular, the seriousness of economic shocks since the mid-1970s has been greater, the scope for economic efficiency reforms wider, and the influence of advocates for economic efficiency in domestic ministries and international financial institutions larger than in developed countries. In contrast, the growth of public environmental concern and organized environmental advocacy groups has been more gradual, opportunities for public participation more limited, and state and private resistance to environmental reforms stronger than in developed countries. Because a much larger fraction of the population depend on direct access to water, land and forests, advocates for social equity in resource allocation have also been more prominent than in developed countries. Finally, advocates pressing for greater social equity, environmental protection and economic efficiency in resource management have often formed tighter ideological and organizational alliances than their counterparts in developed countries.

⁴³ McCormick (1989) provides an excellent history of environmentalism as a social movement. Bramwell (1989) makes an interesting argument on the scientific and philosophical underpinnings of Western environmentalism.

⁴⁴ See Derthick and Quirk (1985) on the rise of efficiency concerns in the U.S. See Williamson and Haggard (1994) for a more general discussion of the problems of the welfare state and the increasing influence of advocates for economic efficiency in developed and developing countries.

⁴⁵ On the history of equity demands in European agriculture, see Moore (1966: 459-60) and Tilly (1975: 21-25); on conflict over European forests, see Thompson (1975) and Westoby (1989: ch. 11). On more recent equity arguments in developed country agriculture, see Tyers and Anderson (1992: 50) and *The Economist* (1992a,b). On indigenous peoples' claims, see e.g. Gennino (1990).

2. Economic shocks and efficiency concerns

The economic shocks of the 1970s and the perceived necessity for "structural adjustment" to maintain access to international capital markets drove many developing country governments to look for ways to reduce budget outlays and generate revenues in all sectors, particularly those where the state or public enterprises owned assets and/or public spending was high (Stallings 1992). The agricultural sector has been a key target for budget cuts, deregulation and privatization in most developing countries (Knudsen and Nash 1991); the energy, water and forest sectors have also been high priority targets for sectoral adjustment (Warford et al. 1994; World Bank 1991a, 1993a,b,c). Advocates for economic efficiency overcame two decades of marginalization in natural resource policy making fora, as their governments authorized them to search for opportunities to contain and reverse trade and budget deficits (Grindle 1995).

3. International diffusion of environmental concerns

In contrast to advocates for economic efficiency, advocates for environmental protection achieved institutional representation more gradually, beginning with the 1972 UN Conference on the Human Environment. The Conference enhanced government awareness and spurred the establishment of environmental agencies in most developing countries. Despite the creation of agencies, environmental advocates have not gained ground as dramatically as advocates for economic efficiency during the 1980s. Sectorally, they have tended to focus on urban industrial pollution and water quality, and have paid less attention to rural forest, soil or water degradation. These sectoral priorities reflect the relatively stronger organization and influence of urban residents on policy making, and in some cases the uncritical adoption of developed country environmental priorities and technologies. In dealing with both urban and rural environmental problems related to over-exploitation of natural resources, environmental advocates have continued to face serious institutional obstacles to reform. These obstacles include lack of information and capacity to analyze environmental impacts; limited formal authority and political influence over government line agencies, private firms or households; difficulty convincing senior political leaders that environmental protection will not hinder economic growth; and legal and political barriers to the organization and participation of non-government groups in policy-making (Ascher and Healy 1990: Ch.2; Dwivedi and Vajpeyi 1995; Morell and Poznanski 1985).

4. Poverty alleviation programs and equity concerns

Advocates for social equity in natural resource policy began to gain influence during the 1970s, when international aid agencies began to pay greater attention to poverty alleviation. Led by the World Bank, most of the major aid agencies funded "institutional strengthening" programs for domestic social service agencies and service-oriented NGOs, including education, health and sanitation programs in urban and rural areas (Ayres 1983: Chs. 5 and 7). Along with improved service delivery, a number of aid agencies began to fund "integrated rural development" projects, which sought to improve the rural poor's access to productive resources, including land, water and energy (Chambers 1983). During the 1980s, however, advocates for the poor suffered a series of setbacks as a result of government stabilization and structural adjustment programs, which led to cutbacks in social welfare expenditures. The political influence of advocates for the poor in government agencies and NGOs diminished dramatically as government and donor funds dried up (Cornia et al 1987; Nelson 1992).

5. Sustainable development as a catalyst for ideological and strategic alliances

In the late 1980s, several factors led advocates for environmental protection, economic efficiency, and equity for the poor to join forces in some developing countries. The first wave of stabilization and structural adjustment programs had been heavily criticized for their social impacts, as well as their possible impacts on the environment (Rich 1994; Warford et al. 1994). These criticisms, combined with the resistance of government agencies and parastatals to reforms that threatened their budgets and their jobs, led some advocates for economic efficiency to fear that their reform efforts could be undone by political opposition. In some countries and international agencies, advocates for environmental protection and social equity were equally concerned that the crisis atmosphere in which most structural adjustment programs were developed had marginalized them politically and threatened to reverse the tenuous policy and institutional gains they had made over the previous decade.

Advocates for all three macro-objectives had also developed greater awareness of the links between poverty and environmental degradation. Research published during the late 1980s also highlighted the potential for efficiency-oriented reforms to redistribute assets and restructure management systems in ways that benefited both the environment and the poor.⁴⁶ Finally, the

⁴⁶ See e.g. Leonard (1989); Repetto (1988a); Warford and Schramm (1988).

publication of the World Commission on Environment and Development's report, *Our Common Future* (WCED 1987) popularized the concept of "sustainable development." The report stimulated much greater interest in and debate on the complementarity of efficiency, environmental protection and poverty alleviation goals in natural resource policy.

Thus by the late 1980s, advocates for economic efficiency, environmental protection and social equity had made some policy and institutional gains in natural resource sectors in many developing countries. The influence of advocates for each objective on policy makers continued to vary greatly, however, across sectors and countries and over time. So too did the level of communication and collaboration among them. Advocates for these objectives continued to be vulnerable to economic, political and social pressures on policy makers to maximize short-term physical production and financial profitability in resource management. Despite widespread awareness of the need for reforms and the potential for reforms to advance only on economic, but also environmental and social goals, the pace and scope of reform have varied greatly among developing countries. Moreover, the implementation of reforms has remained vulnerable to blocking action by government and private actors who benefit from the status quo, and to the severely limited capacity of even well-intentioned field-level government personnel, NGOs and private actors to change the incentives and monitor the behavior of resource users on the ground.

The next chapter (Chapter 2) advances two propositions to explain why attempts to reform natural resource policies in developing countries sometimes fail and sometimes succeed. Chapter 3 provides a method for testing this theory. The second part of the dissertation (Chapters 4-6) seek to determine how well these propositions explain the process and outcome of attempts to initiate reforms in the forest sectors of three high-deforestation tropical countries.

Chapter 2

Initiating Natural Resource Policy Reforms in Developing Countries: Propositions for Investigation

Our basic working hypothesis must be that, within rather broad limits, the existence of defects in political structure does not constitute an absolute impediment to progress in dealing with economic policy problems; by the same token, it is likely that problem-solving will under these conditions follow quite unfamiliar paths whose possible efficiency and hidden rationality we must try to appreciate. (Hirschman 1963: 5)

V. Introduction and summary of the argument

The previous chapter reviewed policy failures in the major natural resource sectors, and traced the history of advocacy for natural resource policy reforms in developed and developing countries. This chapter seeks to identify the most important factors influencing the initiation of natural resource policy reforms in developing countries.

The chapter begins by reviewing the institutional and political obstacles that confront advocates for natural resource policy reforms in most developing countries (section II). It notes that reformers do sometimes overcome these obstacles, and suggests the need to analyze a number of reform attempts to see what explains variation in the success of reform initiatives over time and across countries. After defining the term "reform," it poses a broad research question: What factors are most likely to cause the initiation of reform? To begin answering this question, it reviews the evidence on three factors that are frequently cited in the literature on policy reform: crises, political realignments, and new ideas and information (section III).

Next, it asks whether these factors are likely to catalyze reform in the institutional settings for natural resource policy making that exist in most developing countries. It argues that in general, they are not. At the sectoral level, the combination of strong patron-client ties and a weak analytic base for advocacy makes it very difficult for reformers to redefine sectoral problems as crises, to create political realignments, or to generate and disseminate new information and ideas that might change the interests and values of political actors.

If the factors that most commonly catalyze reform usually don't work in the natural resource sectors of most developing countries, how do reformers ever succeed? The next section (section IV) presents the central argument of this dissertation. It argues that reformers can follow two pathways to overcome the obstacles that usually frustrate their efforts. First, when the rents available from the resource--the most important source of its value for status quo beneficiaries--are nearly exhausted, these beneficiaries may lose interest in defending the status quo. At this point, it may be possible for reformers to frame the status quo as a crisis, and/or to effect a political realignment by gaining control over sectoral policy making institutions. Unfortunately, the exhaustion of resource rents may also mean that it is too late to regenerate the economic value of the resource, to redistribute its remaining economic value in ways that benefit those who have borne the costs of exploitation, or to mitigate environmental damage.

The second possible pathway is via national (rather than sectoral) crises and political realignments. In some cases, national-level crises or realignments may facilitate alliances between sectoral reformers and national political leaders or coalitions. If sectoral and national reformers share a commitment to improving economic efficiency, environmental quality and/or social equity, sectoral advocates may be able to reframe their sectoral problems as national problems, advance sectoral reform proposals that support national goals, and use their alliances with national (and sometimes international) actors to outmaneuver status quo beneficiaries. Further, favorable national circumstances may occur while substantial economic, environmental and equity gains are still possible in the sector. For this reason, it is important to investigate the possibility that favorable national circumstances may offer sectoral advocates a pathway to reform.

The chapter then presents this argument as a pair of propositions about the conditions under which natural resource policy reforms are most likely to be initiated in developing countries. To help the reader follow the development of the argument, I state the propositions here (several of the terms are more precisely defined in the body of the chapter):

1. Under "business as usual" conditions (i.e. in the absence of national crisis or political realignment), reform advocates will seldom be able to initiate reforms until the commercial value of natural resource stocks and flows has declined to a point at which status quo beneficiaries no longer find it worthwhile to defend their privileges.

2. Advocates for particular sectoral reforms (i.e. economic efficiency, environmental protection or social equity) are most likely to succeed in initiating reforms at moments of crisis in the national political economy and moments of national political realignment which favor their particular policy goals.

In conclusion, the chapter notes some problems that may arise when reforms are initiated under circumstances of crisis or political realignment. The same circumstances that make reform possible also tend to limit the focus of reform to the most pressing objective of national leaders. Often, reforms initiated under the pressure of crisis or political realignment focus narrowly on one objective (economic, environmental or social) to the detriment of other equally important, but less salient objectives. This limitation should not discourage reformers from taking the opportunities that come their way. It should, however, lead them to search for ways to meet multiple objectives over time. The concluding chapter of the dissertation will take up the question of what political conditions and institutional arrangements might encourage the development of policies that maximize complementarities among economic, environmental and social objectives.

II. The Problem of Natural Resource Policy Reform in Developing Countries

In most developing countries over the past forty years, natural resource policies have been shaped by economic development ideologies and strategies that sought to maximize physical production and financial profitability; by ruling elites who used natural resources as patronage for key economic, military and political supporters; and by resource management agencies with limited interest in or capacity to investigate the longer-term economic, environmental or social consequences of resource exploitation. Over the past twenty-five years, dedicated government officials, academics and non-governmental advocates in developing countries and their counterparts in developed country aid agencies, universities, environmental and community development organizations have produced a great deal of information about these negative consequences. More recently, concerned individuals and national agencies in developing countries and their international counterparts have formed informal advocacy coalitions to make the case for reforms. Yet, as our review of natural resource policy failures in the last chapter showed, the record of successful reform is not impressive when compared to the remaining policy

failures. Reforms that improve efficiency, environmental protection, or social equity have been rare, and sectoral reforms that successfully integrate two or three of these goals have been rarer still.

To a political scientist, the disappointing record of natural resource policy reform is not surprising. The failure of reformers is overdetermined in most cases. Current policies generally subsidize well-organized and politically influential groups: large-scale farmers and ranchers, industrial, mining and logging firms, urban middle class households, senior officials in government and the military. The costs of these policies are diffused among a wide range of less well-organized and less influential groups: the rural and urban poor, taxpayers as a whole, the global public, future generations. The underlying ideology, analytic methods and economic institutions that drive the current pattern of resource exploitation are far better established than the ideology, analyses or institutions that would support a more long-term, multi-objective approach to resource management. In short, the political economy of natural resource policy in the majority of lower income countries poses very formidable obstacles to reform. The frequent failure of reform efforts is as unremarkable as it is depressing.

More puzzling, and heartening, is the fact that reforms that do seek to broaden the set of objectives in natural resource management--and which impose costs on politically powerful groups in pursuit of those objectives--are nevertheless being undertaken with increasing frequency in a growing number of countries. To explain why reformers have been able to initiate reforms at some times, but not others, we begin with a review of theories on the initiation of policy reform.

To begin, we need to clarify what counts as an instance of policy reform. In this dissertation, not all policy changes qualify as reforms.

To qualify as a reform, a change of government policy must change rules or reallocate resources affecting public and/or private actors, with the goal of increasing economic efficiency, environmental quality and/or social equality.

A policy change that gives priority to one of these goals at the expense of one or both of the others also qualifies as a reform.¹ In most of the following discussion, I will limit my empirical

¹ Many reforms that seek to achieve one of these macro-objectives may in fact undercut one or both of the others, with debatable or unambiguously negative effects on aggregate welfare. On the other hand, a policy change intended to reinforce the status quo or to transfer resources among privileged groups may have the unintended effect of improving efficiency, environmental quality or equity. In this dissertation, I will not call changes with unintentional positive effects "reforms." I will call changes reforms only if their leading proponents (though not

focus to reforms in the major natural resource sectors discussed above--energy, water, agriculture and forestry--but the definition is meant to generalize to all major areas of public policy. The next chapter will present definitions and indicators for efficiency, environmental and equity reforms in the forestry sector of developing countries.

This definition of reform differs from definitions used by other scholars of policy reform in developing countries. It is broader than those of Hirschman (1963) and Huntington (1968), who limit their use of the term to equity-oriented policy changes.² It is also broader than the definitions used by several recent studies of economic policy reform and structural adjustment in developing countries, which concentrate primarily on economic efficiency (Bates and Krueger 1991; Haggard and Kaufman 1992a; Mosley et al. 1991; Williamson 1994).³ Within the specific area of natural resource policy, it is more outcome-oriented than the definition implied by the authors of a major recent study of natural resource policy-making in developing countries (Ascher and Healy 1990).⁴ Finally, it is narrower and more normative than the definition used in Grindle and Thomas' (1991) recent comparative study of policy reform in developing countries.⁵ In short, my definition allows reforms to encompass one or more macro-objectives of public policy, and accepts the possibility that reformers may make trade-offs among these objectives. It requires,

necessarily all members of the coalition supporting the reform) intend to promote efficiency, equity and/or environmental quality, and believe that the changes they advocate will advance one or more of those objectives. Finally, if the implementation of a reform is ineffectual or counterproductive, I will call it an unsuccessful reform.

² Reform, as Hirschman (1963: 267) puts it, "is not just any attack on a problem, but one that has at least some antagonistic content: the power of hitherto privileged groups is curbed and the economic position and social status of underprivileged groups is correspondingly improved." Similarly, Huntington (1968: 344) defines reform as "a change in the direction of greater social, economic or political equality, a broadening of participation in society and polity."

³ For example, Haggard and Kaufman (1992b: 3), introducing an exemplary study of the politics of economic reform in developing countries in the 1980s, characterize economic policy reform during this period as an effort "most generally, to expand the role of market forces and the private sector."

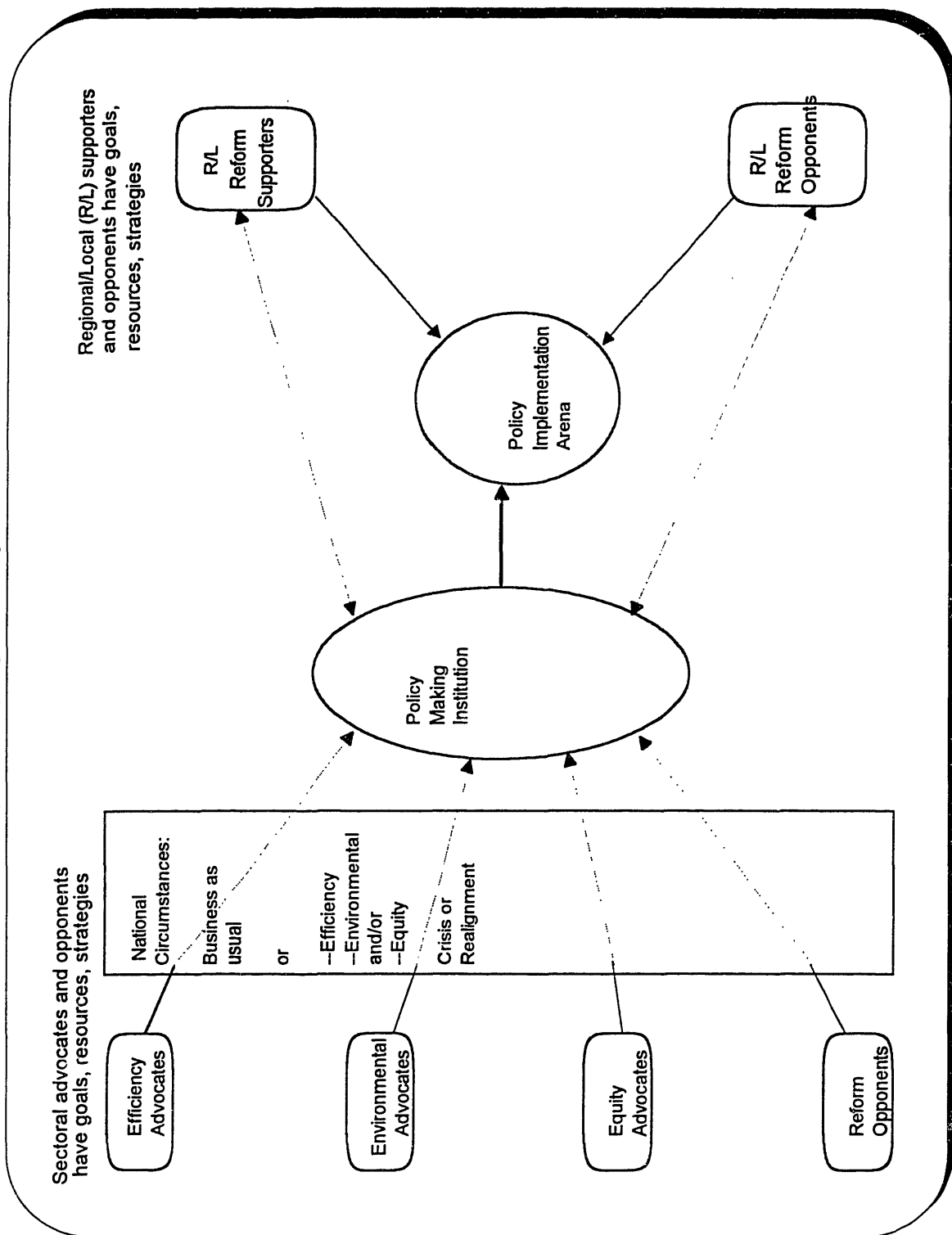
⁴ Although they do not formally define what they mean by natural resource policy reforms, Ascher and Healy (1990: 10) define "sustainable development" as the simultaneous improvement of incomes, distributional equity, environmental protection and participation of all sectors in decision-making. They argue (Ch.8) that to achieve the goals of sustainable development, policy makers must improve the policy making process (by improving information flows among natural resource users and managers) and policy design (by using sanctions and incentives to change the behavior of resource users). Thus, though their definition of reform goals is quite similar to mine (the important differences are that I focus on improving efficiency, not necessarily incomes, and that I do not include participation as an end in itself), their operational definition of reforms focuses on changes to the policy making process, with the explicit argument that these changes will lead to the desirable outcome of sustainable development.

⁵ Grindle and Thomas define reform as "deliberate efforts on the part of government to redress perceived errors in prior and existing policy and institutional arrangements" (p.4), and "pass no judgment on the goodness or badness of any particular change being advocated" (p.195, fn.2).

however, that reforms do more than serve the institutional or personal interests of government officials; to qualify as a reform, a policy change must aim to improve aggregate social welfare through specific efficiency-, environmental- or equity-improving measures.

A reform is a change in policy. A "reform episode" may encompass several discrete reforms undertaken within a specific time period. In this dissertation, a reform episode is a period of time in which policy makers actively consider possible changes in sectoral policies; changes may be proposed by the policy makers themselves, or by advocates who do not have formal decision making authority. A reform episode has three phases--initiation, policy making and implementation (see Figure 2.1 on the next page). It begins with the initiation phase--a decision by policy makers to "do something" to address a policy problem. At this point, policy makers enter the policy making phase of the episode. They may already have a specific reform in mind, or they may consider several alternative policies; as a result of their search for solutions and the influence of various advocacy groups, they may also redefine the problem they originally sought to address. When policy makers enact one or more reforms, they enter the implementation phase, which includes ongoing monitoring and evaluation. If they determine during the implementation phase that the reforms have not addressed the problem they were designed to solve, they may return to the policy making phase. An episode may therefore include several iterations of the policy making-implementation cycle. A reform episode ends when senior policy makers declare (or behave in ways that indicate) that they do not intend to enact any additional reforms to address the policy problem(s) as they have been defined in the course of the episode. A new episode may begin with the identification of a new problem, or with the decision to reconsider current policies after a period in which senior policy makers thought they were adequate to achieve sectoral goals.

Figure 2.1: Framework for Describing and Analysing Reform Episodes



III. Why are reforms initiated?

With these definitions in mind, we can turn to the general question of why policy reforms are ever initiated. After listing the three most frequently posited causes of reform--crisis, political realignment, and new ideas and information--we will review the theoretical literature to clarify the pathways by which each of these causes is supposed to operate. Next, we will see how the institutional setting for natural resource policy making in developing countries constricts each of these causal pathways, and explore the possibility that advocates can sometimes overcome sectoral obstacles by enlisting support from political leaders at the national level. Finally, we will formalize this analytic framework as a set of propositions about the paths by which advocates may be able to initiate natural resource policy reforms in developing countries.

A. Theories of reform initiation

In broad terms, policy makers initiate policy reforms when they decide that the political, economic and social benefits of a current policy no longer outweigh its costs. The literature on policy making identifies three types of change in policy makers' perceptions that may stimulate reform: dramatic events that lead policy makers to redefine a problem as a crisis; political realignments that create a coalition supportive of reform; and new information or ideas that change political actors' perceptions of the costs and benefits of the status quo relative to alternative policies.⁶

Crises, political realignments and new ideas are of course not mutually exclusive; they frequently interact in cases of major policy change. Sudden and dramatic political realignments (e.g. the Conservative Party victory in Britain in 1979), new information confirming a causal idea (e.g. the correlation of stratospheric ozone depletion and CFC concentrations over the Antarctic in 1987) or the articulation of a new moral idea (e.g. U.S. President Lyndon Johnson's announcement of a "war on poverty" in 1964) can create a sense of crisis. Similarly, crisis can spur political realignment (e.g. balance of payments crises contributed to regime change in some

⁶ The following discussion draws on Kingdon's (1984: Ch.8) framework for analyzing the process of policy initiation. Kingdon argues that policy change occurs when there is a conjuncture of three "streams": problems (particularly though not exclusively problems which escalate to become crises), policies (ideas developed by members of policy networks to deal with problems; these ideas may have been developed long before the problem reaches the top of the policy agenda and becomes the subject of public action), and politics (in particular, the creation of a potentially winning coalition in favor of specific policy measures, due to changes in legislative majorities or alignments, political or bureaucratic leadership, and/or public opinion, any of which may have been influenced by advocacy campaigns specifically targeting a particular problem or promoting a particular policy).

highly indebted developing countries in the early 1980s), and drive a search for new ideas (e.g. the perceived crisis of Soviet development contributed to the evolution of the ideas of *glasnost* and *perestroika* during the 1980s). New ideas can also contribute to political realignments (e.g. the spread of Keynesian macroeconomic theory contributed to the formation of a political consensus supporting "embedded liberalism" during the 1950s)⁷ and political realignments can also generate new ideas (e.g. rising support for conservative social policy in the U.S. during the 1980s stimulated the search for alternatives to the current welfare entitlement system).

These three causes of policy change are frequently connected in practice, but theorists of policy change often argue for the dominance of one type of cause over others. The following review summarizes the major theoretical arguments for and against each factor. It also traces the causal pathways that connect each factor to policy change.

1. The role of crisis

Crisis--defined here as the perception among politically influential actors that a social problem has become a serious threat to national political stability and/or social welfare and requires immediate governmental action to avert--has frequently been invoked as a major motive force for government action.⁸ In his seminal discussion of the politics of policy reform in Latin America, Hirschman (1963: 260-61) argued that crisis may be necessary to stimulate reform for several reasons.⁹ First, decision-makers in complex organizations (in this case national governments) have a limited "attention budget" to devote to the many issues that superiors, subordinates and

⁷ On "embedded liberalism," the international consensus among advanced industrial countries to limit the domestic impacts of international free trade by pursuing Keynesian economic management at the national level and allowing temporary exceptions to the rules of international trade and monetary regimes, see Ruggie (1983).

⁸ On the role of crisis in reform initiation, see Downs (1973), Horowitz (1989a: 204-05), Kingdon (1984: 99-101), Lasswell (1948), Lindblom (1959) and Olson (1982). My definition is somewhat broader than the one used in the major comparative study of the role of crisis in political development (Binder et al. 1971). In that study, Verba (1971: 302) defines crises as "situations in which the basic institutional patterns of the political system are challenged and routine response is inadequate"; later he specifies that "crisis vis a vis a problem area exists when there is a need for institutionalization to avoid the overthrow of political leaders" (p.307, fn.21). My definition does not require all crises to challenge basic political institutions (e.g. regime leadership or type, system of interest representation, economic organization). Crises can be specific to an economic sector (e.g. manufacturing, agriculture, forestry) or a social group (e.g. the urban poor, formal sector workers, an ethnic minority), and can threaten core regime goals, policies and political support without directly threatening the overthrow of leaders. I will argue, however, that crises that directly threaten political leaders usually create greater opportunities for sectoral reform than crises that only threaten sectoral policies and institutions.

⁹ My use of the term crisis is much narrower than Hirschman's definition of crisis as a "situation in which there is a great stress toward action, toward the resolution of conflict" (1963: 260, citing Lasswell 1948: 262).

external advocates present as calling for action. The problems on which they are most likely to act are those which appear most immediately threatening to their personal standing, organizational mission and/or overarching national goals, and on which a "critical mass" of supporters and critics are calling for action.¹⁰ Second, the escalation of a social problem to crisis levels (e.g. balance of payments problems lead to a moratorium on new lending by major creditors; overuse of pesticides kills pest predators, causing a pest outbreak which threatens major food crops; small-scale occupations of unused land on large estates lead to the formation of a rural revolutionary organization) may broaden the base of political supporters for reform and shrink the base of opposition. Third, the escalation of a problem to the crisis level may reveal new information about the causes of the problem itself, making it possible for policy makers to identify possible solutions.

Though crisis is commonly described as either a necessary or a sufficient condition for reform, not all scholars of the policy process agree. Kingdon (1984: 99-106) suggests that crisis is only one type of "focusing event"; personal experiences of key individuals in the policy process or the gradual accumulation of evidence may also capture the attention of policy makers. Moreover, using a "garbage can" model of the policy process (cf. Cohen et al. 1972), Kingdon argues (Ch.8) that it is the conjuncture of focusing events, available policies, and a critical mass of political supporters that creates the preconditions for reform. Finally, he notes (p.214) the role that policy entrepreneurs may play in reframing social conditions (ills that government cannot address) as policy problems (ills that the government can and should address), and reframing policy problems as political crises by linking them to dramatic focusing events.¹¹ Grindle and Thomas (1991: Ch. 4) take an even stronger stand, arguing that crisis is neither necessary nor sufficient for reform. They develop a model in which developing country policy elites face both

¹⁰ A rationalist might argue that policy makers should act on the problems for which available resources are likely to generate the largest possible social welfare gains; these problems are not necessarily the most serious, since the "most serious" category will include many problems which are intractable given current resources. In fact, there are many examples from both developed and developing countries of major policy reforms targeted at problems which were generally agreed to be intractable at the time they became the focus of policy. See for example Lowi's (1979) discussion of President Johnson's on War on Poverty, and Hirschman's (1963: 237) discussion of "the tendency of motivation to pull ahead of understanding...[in] latecomer societies which are anxious to attack a variety of problems regardless of whether their resources, abilities and attitudes are in harmony with the tasks they are undertaking."

¹¹ Polsby (1983: 168) makes a similar point by noting that reformers may sometimes be able to create the perception of crisis among political leaders and influential publics.

crises and less acute social problems. In this model, the presence of crisis is an independent variable, influencing how policy reforms will be made, but not whether they will be made.¹²

Assuming for the moment that crisis may be sufficient to induce policy reform, even if it is not always necessary, we still need to identify the conditions under which decision makers are likely to define a policy failure as a crisis. Hirschman and others have pointed out that it usually takes "shocks"--sudden, dramatic changes in important indicators of government performance or social welfare--to put problems on policy makers' action agendas. Kingdon and others have argued that reform advocates may sometimes be able to bring problems to the top of the action agenda by framing shocks as crises; advocates may also be able to show policy makers and publics that current policies are the underlying causes of the proximate shocks. The following statements summarize the discussion about the framing of shocks as crises and about the identification of current policies as the underlying causes of shocks:

- 1) Policy failures which generate or fail to prevent shocks (observable, rapid, large and negative changes in economic, environmental or social indicators or behaviors which are intentionally regulated or unintentionally affected by the policy) are more likely to be perceived as crises. The higher the likelihood that a policy will generate shocks, and the larger the negative effects of shocks, the higher the likelihood that policy makers will view the shock as a crisis and identify the policy as its underlying cause.
- 2) The more directly reform advocates can connect policy-as-cause and shock-as-effect, the more effectively they can mobilize potential reform beneficiaries to support reform, and the more compellingly they can argue that policy reform supports core government goals or sources of legitimacy (e.g. sustained economic growth, improvements in social services, reductions in corruption), the more likely that policy makers will choose policy reform (rather than the provision of additional financial, technical or political resources to alleviate the immediate negative effects of shock) as the appropriate strategy for addressing the crisis.

¹² Specifically, Grindle and Thomas argue that policy elites in developing countries can initiate reforms in the absence of perceived crisis. In these "business as usual" situations, they propose that reforms will not have major distributional consequences for influential social groups, the actors involved will be primarily agency officials rather than political leaders, and the reforms enacted will be incremental rather than innovative.

Later in this chapter, we will consider the challenges reformers face when they try to frame natural resource sector shocks as crises, and when they try to advocate for policy reform rather than direct assistance to those affected by shocks in the natural resource sectors. We will also consider the potential for reformers to advance their sectoral reform goals during periods of national crisis. I will then modify these initial propositions on the role of crisis, so that they better reflect the problems reformers face in the natural resource sectors of developing countries.

2. The role of political realignment

Whether "objective" or "manufactured," crises raise the perceived costs of the status quo for policy makers. Political realignments change the perceived costs of the status quo either by changing the decision makers themselves, or by changing the composition of political coalitions which act as collective decision makers. Huntington (1968: 352-57) argues that the core challenge for reformers is to create winning political coalitions in favor of reforms. He notes that reformers must consider the interaction between 1) the packaging and sequencing of reforms and 2) the mobilization of political supporters and opponents. Whether reacting to the political mobilization of previously inactive social groups, actively seeking to mobilize supporters, or trying to avoid mobilizing politically influential defenders of the status quo, "the key question for reformers concerns the rate and sequence of the mobilization of new groups into politics" (p.354).¹³ Similarly, Migdal (1987: 398-402) argues that the fundamental task of political leaders in developing countries is to create political coalitions of both state and non-state actors strong enough to displace traditional elites who threaten to block reforms, but not so strong that they threaten the reformist political leaders themselves.

There is broad agreement on the importance of political realignments in the reform process, but there is much less agreement on whether or how reformers can create coalitions to support reform. The basic problem for reformers is that the beneficiaries of current policies frequently form well-organized and politically influential lobbies for their perpetuation, while the

¹³ Huntington also argues that violence or the imminent threat of violence is a prerequisite for reform (1968: 357), but he qualifies this claim with later amendments (pp.357-59) and examples of non-violent action. The main thrust of his argument seems to be that reform requires not only the political mobilization of new groups, but also "the diversification of political techniques and a threat to existing political organizations or procedures" (p.359), where the threat is often though not always one of violence.

potential beneficiaries of reform are generally less well-organized and less influential. In this vein, Huntington (1968: 355) quotes Machiavelli's observation:

the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who would profit by the new order, this lukewarmness arising partly from fear of their adversaries, who have the laws in their favour; and partly from the incredulity of mankind, who do not truly believe in anything new until they have had actual experience of it.

Mancur Olson (1965) restated this problem by pointing out that individuals are unlikely to participate in collective action to seek public goods, since the cost of action to them as individuals is likely to outweigh their gain from the provision of the good; he later (1982: 144-5) applied his theory to the issue of economic policy reform, and concluded that it would be difficult to build coalitions to counter the influence of relatively small and well-organized groups of economic producers. Olson's argument has been extensively elaborated by public choice theorists and applied to economic policy making in developing countries (see e.g. Krueger 1974; Meier 1991; Srinivasan 1985). It has been qualified by Wilson (1980), who points out that not all policies produce concentrated benefits and diffuse costs, and that policy reformers often consciously design their proposals in such a way that the associated costs and benefits create winning coalitions. Ascher (1984) and Nelson (1992) have applied Wilson's insight to analyze the politics of targeting redistributive reforms in developing countries, and Oye and Maxwell (1994) have applied it to explain why some industries actively support environmental regulation of their activities.

This review raises three basic questions: under what conditions will those who bear the costs of status quo policies mobilize to demand reform?; when will status quo beneficiaries be less likely to oppose reform?; and when will political leaders decide that the political benefits of enacting reform, in terms of maintaining or increasing their base of political support, outweigh the loss of support from status quo beneficiaries? Our review of theories of collective action suggests that the concentration, size and certainty of costs and benefits associated with an actual or proposed policy go far toward determining the strength of political support for it. The content of proposed reforms--particularly their distributional impacts--therefore plays an important role in influencing the levels of support and opposition. From the viewpoint of political leaders, not only

the strength of support and opposition for particular policies, but also the importance of supporters and opponents to their political base, must weigh heavily in their decisions on whether or not to initiate reforms. The following summary statements formalize these points:

- 1) The strength of political support and opposition to the initiation of a reform will depend on the magnitude, distribution and certainty of costs and benefits of the proposed reform relative to those of the status quo for each affected group. The larger, more concentrated and more certain the expected benefits of a reform for potential beneficiaries relative to those of the status quo, the more likely that they will organize to support it. Conversely, the smaller, less concentrated and less certain the expected costs of a reform relative to the status quo, the less likely that status quo beneficiaries will organize to oppose it.
- 2) Political leaders will weigh not only the strength of support and opposition to reform, but also the political importance to the governing coalition of supporters and opponents. The more important the support of the political actors who favor reform and the less important the support of those who oppose reform, the more likely that political leaders will support reform. As a corollary, the less likely that the withdrawal or withholding of support by reform opponents would cause the fall of the governing coalition, the more likely that political leaders will initiate reform.

Later in the chapter, we will see that in most developing countries, the concentrated benefits and diffuse costs of status quo policies, and the importance of status quo beneficiaries in governing coalitions, make it very difficult for advocates to initiate sectoral reforms. On the other hand, we will consider the possibility that political realignments at the national level may create opportunities for reform at the sectoral level.

3. The role of new ideas and information

Along with crises and political realignments, scholars have argued that new ideas and information about current policies and problems may have a substantial impact on the prospects for policy reform. New ideas and information can affect actors' assessment of a particular policy's costs and benefits; of the range of policies available to deal with a social problem; of the range of problems

that require policy action; or of the values that shape the definition of their interests.¹⁴ New information about the negative impacts of current policies on overarching social values, government goals or influential groups may lead policy makers and affected groups to reassess the costs and benefits of the status quo relative to reform options. Similarly, new information about the potential benefits of alternative policies may undermine political support for the status quo. Like new information, new causal or principled ideas may change political actors' assessment of the costs and benefits of the status quo and reform alternatives, given their interests and values. More importantly, they may change actors' underlying interests and values themselves. New scientific and technical ideas, such as the discovery of new environmental threats or technologies for managing them, may lead actors to define new policy problems and interests in them. New moral or ethical ideas, such as concern for cultural survival or the protection of biological diversity, may lead actors to redefine the values that shape their economic and political interests, and thereby change their interests in particular policies.

In principle then, new information and ideas can change political actors' perceptions of the costs and benefits associated with current and alternative policies; the set of feasible policy options; the set of problems requiring policy action; or the definition of their interests and values in relation to a policy problem. Scholars debating the influence of ideas on policy change have, however, raised two challenges to those who claim that ideas do play an important role. One counter-claim is that ideas do not have any causal significance in explaining policy change. The second is that policy makers and policy making systems have very limited ability to assimilate and use new information and ideas.

¹⁴ This typology of ways in which ideas can affect policy draws on Goldstein and Keohane (1993), but differs in several respects. Goldstein and Keohane define three types of ideas: worldviews (basic ideas about the meaning and purpose of life); principled beliefs (ideas about what is morally right and wrong); and causal beliefs (ideas about causal relationships). They suggest three pathways by which each of these types of ideas may affect policy: by guiding the definition of interests and options at moments of historical disjuncture (ideas as "roadmaps"); by providing focal points for convergence when actors in multi-party negotiations must choose among multiple Pareto-improving equilibria (ideas as "focal points and glue"); and by becoming embodied in institutions (laws, rules, organizations, norms) which persist even after the initial conjuncture of power, interest and ideas has passed. The typology proposed here includes principled beliefs and causal beliefs, but not worldviews, whose definition and empirical investigation may be problematic. The typology presented here also includes a category called "information," which may change actors' assessment of the magnitude and distribution of costs and benefits associated with a given set of issues and interests, but not their definitions of issues or interests. In discussing the ways that ideas can affect policies, it focuses primarily on ideas as roadmaps, especially on the ways in which new ideas change actors' conception of problems demanding policy change, the policy options available to deal with these problems, and their interests in these policy options.

The first debate is most well-developed in the international relations literature (see the reviews in Goldstein and Keohane 1993; see also Adler and Haas 1992: 368-71). Realist and neorealist theorists generally assume that a state only adopts new ideas when they serve to justify or advance the state's material and political interests; as Goldstein and Keohane put it (p.4), "interests are given and logically prior to any beliefs held by the actors." Those who argue for the independent force of ideas assert that one of the most important functions of new ideas is to change policy makers' assessment of their interests, or to define those interests where they are not obvious (Haas 1992). They also note that shared principled or causal ideas can create "focal points" (cf. Shelling 1961) on which actors can agree when their interests and capabilities in a particular situation would allow a number of possible agreements, each with different distributional impacts (Goldstein and Keohane 1993).

In a less sweeping critique of the role of ideas, Kingdon (1984: Ch. 6) points out that ideas never exist independent of individuals and organizations with interests and biases. Individuals and organizations whose primary interests are intellectual or normative rather than material may nevertheless advance particular causal or principled ideas partly because these ideas mobilize their constituencies, justify their existence or otherwise serve their interests. On the other hand, Kingdon argues that in the U.S., competition among a large number of organizations with good access to information and expertise stimulates the generation and improvement of policy ideas. Intellectual competition also acts as a filter to select ideas that serve broader social interests, even if the ideas selected were initially advanced for self-interested reasons.¹⁵

The second debate asks how effectively new ideas that could stimulate policy reform are actually translated into policy proposals in organizational and political arenas--in other words, whether and how the initiation of policy reform can be understood as the result of an organizational or institutional learning process. Simon's (1954) seminal discussion of the limits on information processing and learning in organizations highlights the problem of "bounded rationality," the tendency of individuals and organizations to "solve" complex problems by focusing on their most familiar aspects rather than trying to understand their unfamiliar aspects. Simon argues that people in organizations tend to respond to new problems with standard organizational routines. When standard routines fail, they consider only a limited number of the

¹⁵ See Heclo (1974: 307-08) for a similar argument on the evolution of social policy in Britain and Sweden.

unresolved issues that remain, search among a limited number of possible alternatives to failed routines rather than attempt to develop new ones, and select the first alternative that satisfies a minimum number of core requirements ("satisficing"), rather than comparing a large set of alternatives to see which alternative might provide the best results across a range of goals.¹⁶ Lindblom (1959) applied Simon's logic to characterize public policy making as "the science of muddling through." He argued that policy changes incrementally, in response to the changing interests and capacities of administrators and interest groups, and that these changes in interest and capacity are only occasionally related to new information or ideas about the ends, means or impacts of current policy.

Other scholars have admitted that cognitive and organizational limitations may seriously constrain policy makers' ability to generate or use new information and ideas, but have argued that learning based on new information and ideas is nevertheless possible and even common in policy. Their arguments rest on two related assumptions. First, there must be groups of experts whose primary interest is in improving social welfare through policy, rather than in advocating policies that directly benefit them as individuals.¹⁷ Second, these experts must be able to participate directly in the policy making process, where they can use new information and ideas as political resources in support of policy reform. Idea-oriented theorists do not fully agree, however, about

¹⁶ March and Olsen (1975) carried this analysis further to show how both individual and organizational factors can impede organizations' ability to process information about the impacts of current policies, and so limit the ability of organizations to generate, process or apply new ideas. Individuals or organizational units may be able to learn from their experience and generate new ideas about how to meet policy goals, but overarching organizational rules may prevent them from changing their behavior; organizations may change policies in response to what they believe to be negative impacts of current policies, but the organization may have no mechanism for determining whether either the old or the new policy is actually related to the perceived negative impact (i.e. the organization cannot isolate the influence of its policies from other factors); or organizations may correctly determine that current policy is having negative impacts, but be unable to monitor the effect of new policy, either because of characteristics of the new policy itself (e.g. it requires decentralized administration) or because of changes in the environment (e.g. several other exogenous factors that were contributing to the problem changed at the same time the new policy was introduced).

¹⁷ These theories do not require experts to be altruists, but they suggest that at a minimum, there may be many cases in which experts' personal and institutional interests do not conflict with their analyses, and that in some cases, experts may be willing and able to advocate policies they believe will advance general welfare (as they define it) even at the risk of their careers. Of the authors I discuss, Peter Haas (1992:20) comes closest to asserting that some experts (those who participate in "epistemic communities"; I discuss this concept later in this section) do act altruistically: "The combination of shared causal beliefs and shared principled beliefs held by epistemic community members would inform the advice they offer and would offset or outweigh the pressures for them to offer alternative advice which is more consistent with the preexisting political interests or preferences of high-level policy makers or which might further their individual careers." One may be skeptical of this claim as a general description of the behavior of experts and still accept that it may accurately describe the behavior of experts in some cases.

the definition of expert networks, their place in policy making systems, or the pathways by which their knowledge becomes political power.

Heclo (1974) conducted a major study of the role of learning in social welfare policy reform in Britain and Sweden which has stimulated further research on "social learning" models of policy change. He found (pp.305-15) that the emergence and transmission of new ideas, as well as changes in "the possession and relationships of power among conflicting groups" (p.305) had sparked policy reform, and identified several pathways for social learning. Elites--including individuals, agencies and political parties--may reframe conditions as problems and advocate policy reforms to address them. Broad social groups affected by previous policy decisions may also mobilize to demand that policies be extended or reversed, "signaling" the need for reform to policy elites. Heclo notes the variety of pathways and sequences that may link elite advocacy and mass mobilization, and concludes (p. 307) there is no one model or process for social learning.

In his later discussion of "issue networks" in the U.S., Heclo (1978) does move toward specifying a key actor group that translates ideas into policies. Heclo defines an issue network as "a shared-knowledge group having to do with some aspect (or, as defined by the network, some problem) of public policy" (p.103). In Heclo's formulation, networks share knowledge, but not necessarily interests, or a commitment to joint action; their members "reinforce each other's sense of issues as their interests, rather than...interests defining positions on issues" (p.102). He argues (p.102) that issue networks are replacing "iron triangles" (well-defined, interest-based strategic alliances among legislators, interest groups and agency administrators) as the most important influences on the development of public policy. On the other hand, he emphasizes that membership in issue networks is not well-defined, and that it is difficult to identify network leaders, modes of influence or impacts. Heclo therefore has difficulty describing the pathways by which issue networks translate ideas into policy reforms (see pp.102-05).

In contrast, Kingdon (1984) and Haas (1992) formulate models of the policy process in which expert networks are more tightly defined and their causal impacts are more clearly specified. Kingdon (1984: 123) defines policy communities as "specialists in a given policy area," who may be in government or non-government agencies. He argues that some communities are fragmented and conflictual, approximating Heclo-style networks, while others are tight-knit and may develop common understandings and goals. The members of a "policy community" as

defined by Kingdon may act in a unified fashion to identify and advance ideas, but most policy communities act more like ecosystems, generating and screening ideas through competition, than like individual organisms advancing a single set of goals. Kingdon distinguishes a sub-category of "policy entrepreneurs" who use the information and ideas generated by policy communities to put specific proposals on the public agenda and ultimately on the decision agendas of government agencies. In short, policy communities translate information about social conditions into problem definitions and winnow competing policy ideas down to a subset that meets tests of administrative and political feasibility. Other actors, especially political leaders, have substantial discretion over the selection of problems for action and the selection of preferred alternatives out of the subset produced by policy communities.

Peter Haas (1992:3) defines an epistemic community as "a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area." He adds that members of epistemic communities share principled and causal beliefs, methodologies for testing theories and validating evidence, and a commitment to work on a set of policy problems within their domain in ways that advance human welfare. In other words, epistemic communities function both as networks of experts who broadly agree on problem framings and sets of feasible policy alternatives, and as loosely coordinated advocacy groups which use their expertise and formal authority to argue for enactment of particular reforms. When policy makers face a problem of great complexity and uncertainty, they may turn to the relevant group of experts for advice on how to define and solve it. When this group forms an epistemic community (as distinct from an issue network or a policy community), it may respond by defining and interpreting the problem, helping policy makers define and assess their interests, presenting reform proposals as options, and, most importantly, by advocating a subset of the potentially feasible policies in at least a semi-coordinated way. Over time, an epistemic community may successfully institutionalize its participation in the policy process and/or lead policy makers to enact its preferred reforms.

Keck and Sikkink (1994) have extended and modified the expert network model in several ways that are relevant to the discussion of policy initiation in developing countries. They define "transnational issue networks" (TINs) as "the set of relevant actors working internationally on an issue who are bound together by shared values, a common discourse, and dense exchanges of

information and services" (p.1). They add that TIN members are motivated primarily by shared principled beliefs in morality and justice, distinguishing them from members of epistemic communities, whom they see as motivated primarily by shared causal beliefs.¹⁸ The ideas that TINs bring to policy debates are primarily principled ideas about rights, and the issue areas where they have been most active are characterized by "high value content and informational uncertainty" (p.1); their case studies include TIN action on human rights, women's rights, and environmental protection (which they link to the rights of nature and of indigenous people). The most important TIN members are not technical experts, but rather non-governmental advocates, including members of groups whose knowledge is based on personal experience or traditional wisdom (most notably indigenous people who claim to have knowledge about managing tropical ecosystems).¹⁹

Keck and Sikkink give several examples of the innovative linkage of information, moral and causal arguments by TINs to catalyze policy reform, arguing that people harmed by current policy, their representatives and advocates can use personal experience and moral arguments as effectively as technical experts use "objective" data and methods to frame issues, define alternatives and advocate reforms.²⁰ TIN members have attempted to integrate accurate information about the negative effects of developing country government policies (they have also targeted developed country governments and multinational corporations); dramatic images and

¹⁸ It is not clear that Peter Haas would agree with this characterization of epistemic communities, since he emphasizes (1992: 16-20) that it is the addition of causal to principled beliefs that separates epistemic communities from interest groups, and the addition of principled to causal beliefs that separates them from professions and disciplines.

¹⁹ According to Keck and Sikkink (p.5), TIN members, like the members of Haas' epistemic communities, are motivated primarily by "intellectual or value commitment to a position rather than the direct material benefits they would reap from the outcome." They qualify this statement by admitting that TIN members are not pure altruists: "they derive satisfaction [and] seek influence and power within their spheres." There is a problem with even the qualified claim, however, when applied to the representatives of the disenfranchised social groups who are often the most compelling public voices of TINs. While the primary concern of many NGO workers (and their allies in governments and international organizations) may indeed be social justice, the representatives of a disenfranchised group may be primarily interested in securing or advancing the material well-being of the group. In the discussion that follows, I will call those who claim to represent a potential beneficiary group without belonging to it "advocates." I will call those who both belong to and represent potential beneficiary groups "beneficiary group representatives."

²⁰ The authors note that most of the moral and causal ideas TINs advance are not novel; part of their power stems from the fact that they are ideas on which broad international consensus exists, so that "the problem is...transforming diffuse agreement (protect the environment, defend human rights) into willingness to take action" (p.23). They argue that TINs innovate primarily by reframing current policies as problems from the standpoint of emerging international norms, and by proposing new forms of international action to catalyze policy change.

personal testimony that make the information appear shocking and compelling, moral arguments for sanctioning or isolating the target governments or corporations; and causal arguments for using sanctions to change the policies of targets. This combination has been most effective when their targets are vulnerable to international economic or diplomatic sanctions, and when the international actors with the power to sanction (especially developed country governments and aid agencies) have made formal treaty or soft law commitments to uphold standards that the targets are violating.

This review of debates on whether and how ideas contribute to the initiation of policy reform suggests two assumptions and three summary statements. I will assume that new ideas and information do not always serve only to reinforce or justify actors' current values and interests; I will also assume that argument and persuasion based on ideas, along with coercion and compensation, may sometimes influence which issues rise on government policy agendas. With these operating assumptions in mind, we can highlight the factors that seem to have the most influence on whether policy makers will seek new information and ideas about current policies, turn to experts for these ideas, or accept their recommendations on policy reform. The most important factors identified in the literature include a) the level of uncertainty among policy makers about the definition, causes and effects of a particular policy problem; b) the amount of accumulated information and ideas available for experts to use as resources in the political arena; c) experts' level of agreement on the problem and the policy changes needed to solve it; and d) the extent to which like-minded experts form de facto coalitions to influence policy, and gain access to policy making institutions. The following summary statements make more formal claims about the likelihood that each of these factors will lead policy makers to initiate reform:

- 1) The greater the uncertainty among political actors about why current policy is causing negative impacts, and about the existence and viability of alternative policies, the more likely that policy makers will search for new information and ideas about alternative policies.²¹

²¹ This formulation assumes that at least some political actors have already argued that the current policy does produce serious negative impacts, and that their case is convincing enough to focus debate on the size of the impact, the causal mechanisms that relate the policy to the impact, and alternative policies that could reduce this impact while maintaining at least some of the positive features of current policy.

- 2) The higher the level of expert/advocate knowledge and consensus about the causes and effects of current and alternative policies, the more likely that policy makers will turn to experts/advocates for information and ideas.²²
- 3) The higher the level of expert/advocate consensus about the need for reform, the closer the coordination among a group of like-minded experts/advocates, and the more strongly institutionalized the opportunities for at least some members of the expert/advocate coalition to participate in policy making, the greater the likelihood that policy makers will adopt the expert/advocate coalition's policy recommendations.

In the following section, we will consider the many constraints on the use of information, ideas and expertise by would-be natural resource policy reformers in developing countries. These constraints make it highly unlikely that new information and ideas, even when conveyed by committed experts, will be sufficiently compelling to stimulate reform unless they are linked to crises and/or political realignments. Though they are almost never sufficient to initiate reform, new ideas and new information are a critical resource for sectoral advocates as they seek to gain the attention of national allies and to convince them that proposed sectoral reforms can serve national goals.

B. Obstacles to the operation of crisis, realignment, and new ideas as catalysts for reform

At the beginning of this review we noted that crises, political realignments and new ideas often interact to cause policy reform. Yet both theory and evidence suggest that some reforms are more clearly driven by one type of cause than by others. We have just reviewed some of the most pertinent literature on each of these causes, and traced the causal pathways by which they are supposed to operate. To formalize the discussion, we presented summary statements about the conditions under which each cause is more or less likely to operate. This section reviews these summary statements, and argues that in the natural resource sectors of most developing countries, the conditions that facilitate reform via crisis, political realignment or the diffusion of new ideas

²² The term "expert/advocate" is a shorthand way of acknowledging Keck and Sikkink's (1994) point that advocates with access to technical information, individual and community stories can be important conduits for information, causal and principled ideas, even if they are not technical experts and do not use scientific methodologies (cf. the preceding discussion on the role of new ideas).

are unlikely to be met. It then argues that sectoral reform is more likely to occur as a result of national crises and realignments, which provide greater opportunities for sectoral advocates to overcome the obstacles they face at the sectoral level.

1. Review of summary statements about reform pathways

To start, we will review the summary statements about causal pathways from crisis, political realignment and new ideas to reform.

Summary statements about the pathway from crisis to reform:

- 1) Policy failures which generate or fail to prevent shocks (observable, rapid, large and negative changes in economic, environmental or social indicators or behaviors which are intentionally regulated or unintentionally affected by the policy) are more likely to be perceived as crises. The higher the likelihood that a policy will generate shocks, and the larger the negative effects of shocks, the higher the likelihood that policy makers will view the shock as a crisis and identify the policy as its underlying cause.
- 2) The more directly reform advocates can connect policy-as-cause and shock-as-effect, the more effectively they can mobilize potential reform beneficiaries to support reform, and the more compellingly they can argue that policy reform supports core government goals or sources of legitimacy (e.g. sustained economic growth, improvements in social services, reductions in corruption), the more likely that policy makers will choose policy reform (rather than the provision of additional financial, technical or political resources to alleviate the immediate negative effects of shock) as the appropriate strategy for addressing the crisis.

Summary statements about the pathway from political realignment to reform:

- 1) the strength of political support and opposition to the initiation of a reform will depend on the magnitude, distribution and certainty of costs and benefits of the proposed reform relative to those of the status quo for each affected group. The larger, more concentrated and more certain the expected benefits of a reform for potential beneficiaries relative to those of the status quo, the more likely that they will organize to support it. Conversely,

the smaller, less concentrated and less certain the expected costs of a reform relative to the status quo, the less likely that status quo beneficiaries will organize to oppose it.

- 2) Political leaders will weigh not only the strength of support and opposition to reform, but also the political importance of supporters and opponents to the governing coalition. The more important the current or potential support the political actors who favor reform and the less important the current or potential support of those who oppose reform, the more likely that political leaders will support reform. As a corollary, the less likely that the withdrawal or withholding of support by reform opponents would cause the fall of the governing coalition, the more likely that political leaders will initiate reform.

Summary statements about the pathway from new information and ideas to reform:

- 1) The greater the uncertainty among political actors about why current policy is causing negative impacts, and about the existence and viability of alternative policies, the more likely that policy makers will search for new information and ideas about alternative policies.
- 2) The higher the level of expert/advocate knowledge and consensus about the causes and effects of current and alternative policies, the more likely that policy makers will turn to experts/advocates for information and ideas.
- 3) The higher the level of expert/advocate consensus about the need for reform, the closer the coordination among a group of like-minded experts/advocates, and the more strongly institutionalized the opportunities for at least some members of the expert/advocate coalition to participate in policy making, the greater the likelihood that policy makers will adopt the expert/advocate coalition's policy recommendations.

We have now broken down the possible causes of reform initiation into a set of parameters which may take on higher or lower values under particular conditions; higher values increase the likelihood that reforms will be initiated. None of these parameters is readily quantifiable, though it is possible to make ordinal comparisons (e.g. there was greater expert consensus on the causes of ozone depletion in 1987 than in 1984). Furthermore, none of the parameters is a necessary condition for reform initiation. Each may, however, be a sufficient

condition for reform if its value rises above some context-dependent threshold. The context is largely defined by the values of the other parameters, so that a rise in the value of one parameter may trigger reform only because the values of several other parameters were already high (e.g. there was greater expert consensus on the causes of ozone depletion in 1987, and advances in CFC substitute technology had also reduced the expected costs of reform for major CFC manufacturers, who were the most politically important beneficiaries of the status quo).²³

At this level of generality, the propositions have limited explanatory value. They suggest "things to watch out for," but as a set, they do not suggest that any one of the possible causes of reform is more likely to operate than others, or that any one sequence (e.g. shock-->perceived crisis-->expert advocacy-->new information-->realignment--> reform) is more likely to operate than another (e.g. new information-->expert advocacy--> perceived crisis-->reform). We may gain some explanatory power, however, if we can determine the "most likely" value for each parameter in the political setting which most interests us: sectoral institutions for natural resource policy making in developing countries. Combining our earlier review of natural resource policies in developing countries and their historical roots with the causal framework outlined above, we can show that at the sectoral level, the most likely values for these parameters make reform most unlikely, at least in the absence of broader macroeconomic and political changes.

2. Sectoral obstacles to the operation of crisis, political realignment or new ideas

Looking first at the parameters that increase the likelihood of crisis-driven reforms--the potential for shocks and the degree to which advocates can frame shocks as policy-related crises--it is clear that natural resource sectors in developing countries are highly vulnerable to shocks (Stallings 1992: 49-51). Yet many of these shocks (e.g. price changes in international commodity and credit markets, extremes of weather) are beyond the direct control of domestic policy makers. Underlying structural problems (e.g. poor domestic infrastructure, excessive incentives for export-oriented production, underdeveloped insurance markets) may be amenable to policy reforms that would reduce the impact of shocks, but in many cases the length of the causal chain

²³ Almond (1971: 35) makes a similar point about the difficulty of specifying "political boiling points," noting that the impact of structural change on political demands "varies substantially with the structure and the culture of the system."

makes it hard for reform advocates to demonstrate the connection between the shock and specific policy failures.

Even when advocates can trace a causal chain from policies to shocks, political leaders are unlikely to pay attention unless the shocks have directly affected core regime supporters. Since there is often a mutually reinforcing relationship between the political actors whose support is most important for government and regime maintenance (e.g. urban middle class workers in the public and private sectors, domestic and multinational manufacturing corporations, large farmers and parastatals involved in agricultural input and output production and marketing, international public and private investors) and status quo natural resource policies, only shocks that reduce the benefits of status quo policies to these groups are likely to produce advocacy for policy change. These privileged groups tend to have higher incomes and more diverse sources of income than the general public, however, so they are likely to be able to ride out all but the most severe shocks.²⁴ Moreover, even when severe shocks do lead privileged constituencies to advocate for policy change, they are most likely to advocate for additional subsidies and privileges, so their advocacy is unlikely to lead to reform in the welfare-improving way we have defined it.

The difficulty of framing natural resource shocks as challenges to core government goals or to regime legitimacy puts another block in the pathway from shock to reform. Most developing country governments continue to derive legitimacy primarily from their short-term economic performance and their commitment to longer-term industrial development, so shocks in natural resource sectors usually do not present direct threats to regime legitimacy unless the sector is a major source of public revenues or is closely linked to ongoing conflicts over national identity or resource distribution.²⁵

In short, natural resource sectoral shocks are likely, but the translation of their effects into a "crisis" for political leaders is unlikely. Even when political leaders perceive a crisis, their

²⁴ Urban formal sector workers are a partial exception: they usually do not have alternative sources of income (cf. Nelson 1992: 226-31). On the other hand, their vulnerability to changes in food, water, and energy prices and their concentration in urban areas makes them among the groups most likely to mobilize in opposition to cuts in public subsidies on these commodities.

²⁵ Nigeria's fusion of oil dependence with ethnic disputes has twice led to serious civil conflict. Soon after the beginning of oil production in the southeast in the early 1960s, Ibo separatists sought independence in part to win control over oil located in their territory (Young 1976: 471). More recently the negative environmental effects of oil and gas extraction in their Niger delta territory led the Ogoni people to agitate for compensation and a share of production revenues. The subsequent cycle of demonstration and repression culminated in the execution of Ogoni leader Ken Sarowewa (see Welch 1995).

political interests and developmental goals will usually lead them to buttress the status quo rather than produce substantial reform as we have defined it.

The structure of political coalitions may also create barriers to framing natural resource policy failures as crises. If political alignment parameters--the magnitude, distribution and certainty of costs and benefits associated with the status quo and reform proposals, and the relative political importance of reform supporters and opponents--pose a major obstacle to crisis-driven reform at the sectoral level, perhaps political realignment is a more viable primary cause of reform. At the sectoral level, however, organizing the potential beneficiaries of reform and overcoming opposition from status quo beneficiaries are extremely difficult tasks.

Our review of natural resource policy failures in the last chapter showed that the financial and political benefits of status quo policies are substantial, and tend to be highly concentrated on politically influential actors. The costs of the status quo, while often larger than the benefits, are more diffuse. These costs also tend to fall on groups that are politically marginal (e.g. environmentalists), not organized because of collective action problems (e.g. taxpayers), or both (e.g. the rural poor). Furthermore, the benefits of the status quo (and conversely the costs of reform) for status quo beneficiaries are certain, while, as Machiavelli pointed out, the benefits of reform--and even the identities of potential beneficiaries--are much less so; the uncertainties are even greater if reform's primary benefits would be environmental or social rather than economic.

At the sectoral level, the combination of collective action problems and imbalance in the political influence of reform supporters and opponents raises the odds against reform through political realignment. The most likely basis for realignment would seem to be a decline in the benefits of the status quo to the producer and consumer groups and patronage networks who reap most of the gains. Unfortunately, as the first chapter showed, a fall in the benefits of the status quo relative to the costs is most likely to occur when the resource base itself (e.g. soil, water, energy or forests) has been depleted or degraded to such an extent that exploitation is no longer profitable. When the rents from resource exploitation are dissipated and its negative externalities become obvious, organized political support for status quo policies should wither and support for reform may rise. Unfortunately, the long lag times between resource extraction and the appearance of environmental externalities (e.g. water pollution from agricultural runoff, erosion and siltation due to deforestation, depletion of aquifers from excessive water use, contamination

of vegetation by acid rain) mean that the damage may be very costly to repair by the time it appears. Under these circumstances, the cost of rehabilitating the resource to the point where it can contribute to economic efficiency, environmental quality or social equity goals may make implementation prohibitively expensive.

This discussion of the difficulty in connecting cause and effect early enough to mobilize potential reform beneficiaries and convince policy makers of the need for reform brings us to the third set of parameters--the levels of uncertainty among policy makers about policy problems and options; the store of knowledge which experts and advocates can bring to bear on a particular problem; the level of expert agreement on causes, effects and solutions; and the opportunities for like-minded experts/advocates to advance their case in the policy process--which may make new information and ideas important causes of reform.

Current theories on the role of experts as conduits for information and ideas implicitly assume that a) policy makers are often uncertain about causes and effects of policy problems and about the options for policy reform, and b) experts will be standing by, ready to supply information and ideas. In the natural resource sectors of most developing countries, the first assumption may hold, but the second very often does not. In fact, the relatively limited supply of policy-relevant expertise, information and ideas is arguably one of the most important obstacles to policy reform in the natural resource sectors (World Bank 1992: 85-92). With the partial exception of commercial agriculture, research on natural resource management is not a high priority for government or private funding in most developing countries. The research that is conducted tends to focus on boosting production, with some attention to long-term physical productivity. There has been much less research on ways to minimize environmental impacts or improve equity in resource allocation and use (Tolba et al. 1992: 624-30; 730-31). As a result of low and uneven investment in knowledge generation and dissemination, both policy makers and experts in developing countries are usually very uncertain about the impacts of current natural resource policies on goals other than physical productivity and financial profitability. There is especially great uncertainty about the causal pathways connecting policies governing natural resource ownership and use, users' financial and socio-cultural incentives to manage resources for long-term productivity, and the environmental impacts of resource use.

Although capacity remains low overall, international development assistance has helped improve training and research institutions, and has funded a large number of specific efforts to analyze equity, efficiency and environmental impacts of resource use in a number of countries. The priorities for analytic capacity-building have shifted over time, reflecting broad transitions in international development ideology and practice from its origins in the industrialization-oriented technical assistance of the 1950s and 1960s. The 1970s shift to poverty alleviation and "growth with distribution" (cf. Chenery et al. 1974) supported information gathering and analysis on the role of natural resource distribution in perpetuating and alleviating rural poverty (Ayres 1983: Ch. 5). In the 1980s, structural adjustment programs supported the development of methods and institutional capacity to determine the economic efficiency costs of natural resource policy distortions (Warford 1989). From the late 1980s to the present, development agencies seeking to support "sustainable development" (cf. WCED 1987: Ch.2) have funded analyses of the connection between resource use and the growth of national income and wealth (World Bank 1995).

These waves of international concern encompassed the natural resource sectors along with others (e.g. industry, transport). Since the early 1980s, there has also been growing international support for sector-specific analysis and multi-objective planning in the natural resource sectors. International, bilateral and non-governmental organizations have supported natural resource assessments and planning exercises in over seventy developing countries. These assessments have generally sought to identify economic, environmental and social impacts of natural resource use; many of these exercises have also attempted to clarify the impact of national and sectoral economic and social policies on natural resource use.²⁶

Overall, then, knowledge-generating institutions in most developing countries (ministerial planning and budgeting units, public and private research institutes and universities) have considerable capacity for assessing the public sector budgetary implications of their natural resource policies. They have some capacity for assessing the incentive effects of these policies for

²⁶ These efforts have included national environmental assessments (e.g. UNEP- and bilateral aid agency-supported State of the Environment Reports), national management plans (e.g. IUCN-supported national conservation strategies, World Bank-supported National Environmental Action Plans, regional action plans for countries in Central and Eastern Europe and Central America), and sectoral plans (e.g. tropical forest action plans under the Tropical Forest Action Programme) have developed better information and policy recommendations for policy-makers (see WRI et al. 1992b for a catalog and summary of assessments and plans).

private commercial actors, but much less capacity for assessing policy impacts on the behavior of non-commercial actors, particularly rural households and communities. Finally, they have very limited capacity to define indicators, construct causal pathways or assess impacts on environmental quality or social equity at the level of individual households, communities and ecosystems.

What does the generally low and uneven distribution of knowledge and expertise about the links between natural resource policies and their economic, environmental and social effects imply about the likelihood that information and ideas will catalyze reform? First, the fragmented knowledge base makes it relatively unlikely that experts will agree on causes, effects and solutions to natural resource problems, and therefore unlikely that policy makers will turn to experts for advice. There will be exceptions to the rule, however, in countries where domestic and international research programs have created a cadre of sectoral experts and policy research institutions.²⁷ Second, even where sectoral experts do agree on causes, effects and solutions, their ability to spur policy makers to initiate reforms is likely to be low. At the sectoral level, most senior policy makers are either political appointees who owe their allegiance to national political leaders, or "agency insiders" who have come up through the ranks by building patron-client relationships with status quo beneficiaries, who then support their appointment to senior positions. In either case, their primary considerations will be political, and they will resist policy recommendations that threaten to undermine the status quo.

We have noted that domestic and international research and capacity-building programs can build the knowledge base and institutionalize expertise, and that these programs have operated unevenly across countries, sectors and issues. Both the knowledge base and opportunities for institutionalized participation decline as we move from financial to economic to social to environmental analysis. Consequently, we should expect that policy-makers' uncertainty about environmental and social impacts will be significantly greater than their uncertainty about budgetary, financial and economic impacts. Second, because this differential uncertainty stems from low capacity among experts as well as lack of interest among policy makers, we should

²⁷ The Consultative Group on International Agricultural Research is an example of an influential international network with well-institutionalized local affiliates. UNEP's Regional Seas program for the Mediterranean has also supported the development of national capacity to analyze marine pollution in a number of Mediterranean littoral countries (Haas 1990).

expect that domestic experts will have a harder time reaching consensus on resource policies' environmental and social effects than they will on their economic effects. Third, given the relatively greater technical uncertainty surrounding environmental and social equity impacts, we should expect that both domestic and international advocates for these goals will rely more heavily on principled ideas and dramatic testimony to advance their cases than will advocates for economic efficiency.

Finally, we should expect international organizations to be important players in the generation and dissemination of knowledge about policy impacts, both because technical assistance is a core mission for a wide variety of international agencies and because a large and growing number of international agencies have focused on natural resource policies as a priority area for capacity-building and policy dialogue (Fairman and Ross 1996: 41-45). If so, we should expect that those experts/advocates with close links to influential international agencies (particularly major multilateral and bilateral aid donors) will have greater opportunities to participate in the policy process (Kahler 1992: 125-27). The net effect may well be to create transnational but sector-specific policy networks which resemble epistemic communities and transnational issue networks. Nevertheless, in the absence of overarching crisis or political realignment, the fragmentation of knowledge and expertise in the natural resource sectors makes it unlikely that ideas and expertise alone will be able to catalyze reform.

IV. Initiating natural resource policy reform in developing countries: propositions for investigation

This review of the pathways by which sectoral crises, realignments and expertise might catalyze reform should make us pessimistic about the prospects for reform at the sectoral level.

Convincing information about policy failure and sound proposals for pareto-improving reforms seem to be necessary but not sufficient to move sectoral policy makers or national leaders to action. Patronage ties among political leaders, sectoral officials and "distributional coalitions" (cf. Olson 1982) appear to be the key obstacle to natural resource policy reform. Established leaders and officials who are mainly concerned with coalition maintenance are unlikely to change policy in ways that meet our criteria for reform; they have strong incentives to maintain the policy failures that make natural resources attractive forms of political patronage.

If so, one viable route for advocates under "business as usual" conditions might be to combine strong causal and principled arguments with substantial compensation for status quo beneficiaries. We noted that international financial institutions could play an important role here, because of the combination of money, expertise, and convening power that they can bring to the policy process. Nevertheless, the record of aid agencies in economic policy reform to date suggests that they have not made much use of the compensation strategy (Mosley et al. 1991: 160), perhaps because they fear creating moral hazard problems for recipient governments, or because the amounts required to buy off opposition exceed available funds. Moreover, there is substantial evidence that compensation strategies often shift rather than eliminate policy failures. Political leaders often respond to sectoral reform pressures by initiating narrowly targeted reforms; at the same time, they compensate status quo beneficiaries with new kinds of patronage within the same sector (Waterbury 1992: 194). In sum, when we see reform in the absence of crisis, we should expect that status quo beneficiaries have been compensated; we should also be skeptical about the net welfare impact of reform unless we can be sure that compensation has not created new policy distortions.²⁸

A. Initiation via the exhaustion of resource rents

At the sectoral level, we have seen that shocks are likely to occur, but unlikely to be perceived as crises unless they are derivative of broader shocks to the national political economy. We have also seen that status quo beneficiaries will tend to have very great political advantages within sectoral-level policy-making institutions. Uncertainty about the benefits of reform also works against reformers. With the partial exception of economic efficiency arguments, low knowledge-generating capacity makes it hard for advocates to convince policy makers that the benefits of reform outweigh the political risks of reform. These sectoral obstacles lead us to our first proposition for investigation:

²⁸ Oye and Maxwell (1994) make a similar argument about "Stiglerian regulation" of environmental polluters. In brief, they argue that relatively concentrated polluting industries may support environmental regulations or product standards as a way to raise barriers to entry. These regulations may improve environmental quality, while reducing economic efficiency and shifting costs from current polluters to taxpayers and potential industry entrants.

1. *Under "business as usual" conditions, advocates will seldom be able to initiate reforms until the commercial value of natural resource stocks and flows has declined to a point at which status quo beneficiaries no longer find it worthwhile to defend their privileges.*

As we have already noted, even if this proposition holds, it does not offer much comfort to would-be reformers. On the other hand, the declining commercial value of a resource may sometimes reduce the influence of status quo beneficiaries to a point where other reform catalysts--particularly the favorable national circumstances that we discuss below--can operate. If so, reformers may be able to succeed while there is still a resource worth saving.

B. Initiation via national crisis or realignment

We turn now from the rather unpromising set of political conditions at the sectoral level to the national level, where there may be other routes to policy reform. These routes include crisis-driven regime or government change, incremental changes in the governing coalition due to gradual economic and social change, and/or the development of reform coalitions that link sectoral experts with nationally influential political actors.²⁹

Crises in the national political economy, particularly state budgetary and/or balance of payments crises, usually require large cutbacks in public spending, increased taxes, the privatization of inefficient public enterprises, and/or sectoral deregulation to increase investment and productivity. When such crises occur, they frequently lead to major changes in the composition of governing coalitions within ruling parties or the electoral defeat of the governing party, and sometimes to changes in regime (Haggard and Kaufman 1992c). When governing coalitions, governments or regimes change under crisis circumstances, political leaders have a window of opportunity to reduce the influence of political actors who are identified with the status quo, and to develop new political bases of support among previously excluded or marginal actors who may benefit from reforms (Waterbury 1992: 192-94). Political leaders forced by

²⁹ Schattsneider (1975: Ch.2) makes a parallel argument for American domestic politics. He argues that the national political party system is a critical counterweight to the "pressure group" politics of organized interest groups at the sectoral level. National parties facilitate the "socialization of conflict" by giving those who lose at the sectoral level an opportunity to form broader coalitions to challenge pressure group control.

economic crisis to introduce efficiency-enhancing reforms may also choose to introduce environment- and equity-enhancing reforms in natural resource sectors in order to broaden or reshuffle their base of political supporters.

More gradual economic and political change may reduce national dependence on the primary commodity sector for state revenues and economic development, and may also allow political leaders to reduce the use of natural resources as sources of political patronage.³⁰ When economies grow, the share of primary production in national output tends to drop, and the share of manufacturing and services tends to increase (Chenery and Syrquin 1975). The change in economic structure is often accompanied by changes in the identity and influence of political actors. The political influence of landowners tends to decline, and the organization and activity of commercial farmers, urban industrial, financial and other service sector firms and associations, and public sector unions tends to rise (Deutsch 1961).³¹ A further political transition may occur as urban professionals start to form horizontal associations to represent "non-traditional" interests such as environmental protection, democratic governance and aid to the urban and rural poor (Huntington 1991: 67-72). As this process of economic and political change continues, national leaders may be able to rely less on natural resources and more on taxation of manufactures, exports, services and incomes for revenue. They may also be able to reduce their political dependence on individuals, firms and associations who gain incomes and rents from natural resource exploitation, broadening their base of support by awarding credit, trade and market privileges to manufacturing and service sector firms, and by embracing middle class professional causes.³²

One more type of national political realignment that may lead to sectoral policy reform is the formation of coalitions between sectoral experts/advocates and nationally influential political

³⁰ Ranis (1991: 89-90) argues that resource-poor economies are likely to make this transition more quickly than resource-rich economies. Because resource-rich economies are more vulnerable both to international economic cycles and domestic rent seeking, they may actually grow more slowly than resource-poor economies. Sachs and Warner (1995) provide strong empirical evidence to support this proposition.

³¹ The strength of this causal connection between changes in economic structure and changes in the organization and influence of economic interests is one of the most debated topics in the literature on political development. See Almond (1987: 458-9) and Nelson (1987: 106-16) for reviews.

³² Michael Ross (1996a: Ch.5, pp.40-44) argues that economic development in Indonesia has enabled President Suharto to reduce his dependence on logging concessions as a source of political patronage and the military as a source of support. As a result, Suharto has been able to increase logging fees and improve the enforcement of environmental regulations.

actors. As we have discussed above, experts often have great difficulty framing natural resource sector shocks as political crises; even if they succeed in this task, status quo beneficiaries may respond by hijacking the crisis framing to gain policy changes that reinforce their interests.³³ Experts may be able to transcend the limitations of sectoral politics by linking their arguments for sectoral reform to the management of national-level problems or crises. To succeed at the national level, however, they will almost certainly need to augment their knowledge-based political resources by forming coalitions with politically influential actors, who may have a reciprocal interest in using the ideas and institutional credibility of experts. Such advocacy coalitions may include members of domestic and foreign government agencies, academic institutions, non-government organizations involved in policy advocacy, businesses, and bilateral and multilateral aid agencies.³⁴ Members of such coalitions may focus primarily on efficiency, environmental or social equity reforms, or seek to integrate all three goals under the rubric of "sustainable development."

At the national level, however, crises or political realignments that are largely exogenous to natural resource sectors may nevertheless provide opportunities for sectoral reform. In some cases, economic crisis may force national political leaders to make broad-based changes in policy that include the natural resource sectors along with others. Political leaders may also change natural resource policies as they try to guide or ride a wave of political realignment.

Our attempt to see how the main causes of reform initiation might operate in the natural resource sectors of developing countries has led us the long way round, from formidable obstacles at the sectoral level to occasional opportunities at the national level, where exogenous crises and realignments may provide leverage for reformers to overcome their sectoral disadvantages. Thus our second proposition:

³³ Bates (1981: 67-70) gives several examples of African agricultural production and processing industries that faced bankruptcy due to high capital costs and excess capacity. Government finance officials and expatriate advisors helped bring the problems to the attention of senior political leaders, and argued for trade liberalization and an end to capital subsidies as a way to resolve the problem. Industry executives generally succeeded in countering these reform arguments, using the high-level attention to gain additional trade protection and authorization to "rationalize" by creating de facto monopolies.

³⁴ Sabatier (1993) develops the concept of an "advocacy coalition" to explain policy change in developed countries.

2. *Advocates for particular sectoral reforms (i.e. economic efficiency, environmental protection or social equity) are most likely to succeed in initiating reforms at moments of crisis in the national political economy and moments of national political realignment which favor their particular policy goals.*

Sectoral reformers are most likely to succeed when they can frame their preferred reforms as prerequisites or critical supporting elements for the management of national crisis, and when they and/or their national allies are essential partners in new or reconstructed governing coalitions.

International actors, particularly international aid agencies and financial institutions, may provide especially important political and financial resources as brokers of reform. They may be able to use their institutional credibility and insulation from domestic political struggles (assuming that they are not in fact closely identified with one domestic political leader or party) to convene policy discussions involving political leaders, senior civil servants and reform advocates. As we noted in the section on the role of ideas, they may also facilitate the formation of advocacy coalitions linking experts/advocates with key officials in key national ministries (e.g. finance, planning) and with national political leaders. Finally, in exceptional cases, they may provide financial "adjustment assistance" to compensate status quo beneficiaries for the loss of some of their privileges.

C. Limitations on crisis- and realignment-driven reforms

Before proceeding to the methodology chapter, it is important to note some limitations on reforms initiated during moments of national crisis or political realignment. We will return to these limitations and consider ways to overcome them in the concluding chapter of this dissertation.

The limitations arise from the decision-making pressures that occur during moments of crisis and realignment. Decisions made under these conditions are likely to limit the range of problems for sectoral reforms to address. They are also likely to increase the political influence of some reform advocates relative not only to the opponents of reform, but also to other advocates. As a result, the content of reforms is likely to focus on one immediate policy objective, often to the detriment of other equally important but less pressing objectives;

When policy reform in a natural resource sector happens under circumstances of national crisis, the national problem definition is likely to dominate pre-existing sectoral problem definitions. If the national problem is defined as a balance of payments crisis, policy makers will review individual sectors to see what reforms might improve export performance and reduce import demand. If it is defined as a clash between ethnic groups or economic classes with competing entitlement claims, the reforms in individual sectors will focus primarily on redistributing resources to meet these claims.³⁵

The process of decision-making in crisis situations reinforces the tendency to focus on the most pressing aspect of a problem and seek solutions that seem most likely to "fix" the problem as it has been defined. In crises, political leaders usually vest decision-making authority in a small group of close advisors, who seek to define the crisis narrowly enough to generate immediate policy decisions (Grindle and Thomas 1991: 76-79; Polsby 1983: 150-53). Those policy advocates whose proposals are perceived as highly relevant are likely to have privileged access to the policy making process; those whose proposals are not are likely to be excluded. The limited amount of time available for making decisions further restricts reformers' ability to consider multiple objectives. By definition, crises require immediate action. Political leaders taking office as a result of major political realignments also tend to perceive themselves as having a limited "honeymoon" or window of opportunity for major policy innovation before the political actors

³⁵ For example, Broad (1988: Chs. 4-7) shows how crisis-driven stabilization and structural adjustment programs in the Philippines in the early 1980s led efficiency advocates in international aid agencies and their domestic counterparts in the industry and planning ministries, as well as large bankers and exporters who expected to benefit from the reform process, to reframe their preferred financial and industrial sectoral reforms in terms of export earning goals. The crisis and its framing undermined the position of import-substitution advocates and beneficiaries in government and business. Horowitz (1989b) shows how ethnic riots in Malaysia led to the creation of the redistributive New Economic Policy. The reframing of sectoral problems as distributional ones strengthened the coalition of Malay nationalists in the United National Malay Organization, and undermined ethnic Chinese members of the UNMO and technocrats who argued for the continuation of market-based sectoral policies without redistribution along ethnic lines.

they have displaced regroup and begin to challenge their authority. In either circumstance, political leaders at the national level will seek proposals for reform that have already been developed by members of the relevant policy network. There will be few reform episodes in which political leaders are willing to delay action long enough to gather large amounts of new information, or to subject reform proposals to broad public scrutiny, debate or negotiation.³⁶ Consequently, we should expect that combination of a relatively closed policy making process and limited time for policy development will amplify the influence of the advocates whose reform goals are most favored by circumstance.

Thus the national circumstances for policy reform affect not only the framing of sectoral problems, but also the relative political influence of sectoral actors. From the viewpoint of political actors at the sectoral level, the circumstances of crisis or realignment may or may not lead to "accurate" problem definitions; that is, they may or may not match the definitions or priorities of either status quo beneficiaries or reform advocates. Nevertheless, new national problem definitions create opportunities for actors who can frame their preferred policies as solutions to national problems, and obstacles for those who cannot. Policy makers considering sectoral reforms in the context of national crisis will tend to discount the arguments and interests of actors whom they perceive as contributing to or benefiting from status quo policy failures. (If status quo beneficiaries are members of the ruling coalition, however, policy makers may try to compensate them for the loss of benefits.) Conversely, policy makers are likely to give greater attention to the arguments of reform advocates who can make a convincing case that their preferred policies will help resolve the national crisis. They may also support mobilization and political participation by potential reform beneficiaries to counter the political influence of status quo beneficiaries.³⁷

³⁶ Huntington (1968: 346) notes that most successful reformers adopt "Fabian strategy with blitzkrieg tactics." Reformers following a Fabian strategy propose reforms sequentially rather than in comprehensive packages, thus avoiding the creation of blocking coalitions. Reformers using blitzkrieg tactics introduce each individual reform with only enough prior consultation to assure themselves of victory in the relevant decision-making fora, and seek rapid approval to deny the opposition time to mobilize.

³⁷ Pro-equity reformers have often sought to increase the influence of previously disenfranchised groups by establishing new representative institutions. For example, in Peru during the early 1970s, the military reform government of General Velasco sought to strengthen political support for its land reform program by creating a National Agrarian Confederation with local, regional and national institutions for peasant participation (McClintock 1980). Similarly, pro-efficiency reformers have established national advisory groups representing the business interests likely to benefit from liberalization. In Thailand during the early 1980s, Prime Minister Prem set up a national business roundtable to advise the Ministry of Finance and the National Economic and Social

When ruling coalitions change as a result of "normal" electoral politics (reflecting longer-term shifts in the identity, organization, interests or ideologies of political actors), without a single overarching crisis that defines the mandate of the new ruling coalition, the framing of national problems will not be as important an influence on the content of sectoral reforms. Under these circumstances, the relative importance of sectoral status quo beneficiaries and reform advocates in the new ruling coalition is more likely to influence the content of reform.

In general, then, we expect the circumstances that facilitate the initiation of reform to make it difficult for policy makers to consider more than one major reform goal, or to find ways to minimize trade-offs between the major goal and subsidiary goals. Seizing the moment usually means sacrificing the possibility for a careful and comprehensive review of options for making progress on more than one policy goal at the same time.

To point out this limitation is not to suggest that narrowly focused reforms are not worth undertaking. On the contrary, narrowing the focus seems to be a prerequisite for accomplishing any reform at all. In the conclusion to this dissertation, we will return to the question of what political conditions and institutional arrangements might encourage reformers with potentially competing goals to develop policies that minimize trade-offs and maximize complementarities among these goals.

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Chapter 3

Investigating the Propositions: Cases and Methods

I. Introduction

The previous chapter reviewed theories about the initiation of policy reforms, and identified the causal factors that theory suggests should have the greatest influence on the success of attempts to initiate reforms in the natural resource sectors of developing countries. Using this theoretical framework, it advanced two propositions about the prospects for reform in the natural resource sectors of developing countries. First, it proposed that sectoral reformers may succeed when the commercial value of the resource has declined to a point at which status quo beneficiaries are no longer interested in defending their privileges. Second, it proposed that sectoral advocates will have the greatest opportunity to initiate reforms during national crises or political realignments that favor their goals and augment their political resources.

To see how well these propositions explain patterns of natural resource policy making in developing countries, this dissertation examines recent attempts at forest policy reform in a number of tropical developing countries. This chapter first describes the rationale for selecting the forestry sector and for selecting three broadly comparable high-deforestation countries for detailed research (section II). It then explains the methods used to define and operationalize reform initiation as the dependent variable, and to define and operationalize the key causal factors (commercial value of the resource to status quo beneficiaries; national circumstances; match between national circumstances and the goals of reformers; political resources and strategies of reformers and status quo beneficiaries and their interaction) as independent variables (section III).

II. Case Selection

The cases have been selected to ensure adequate variation on the causal factors that are central to the argument, while controlling for a number of other causal factors which, while potentially important, are not as interesting or germane to the research. I began by selecting the forestry

sector in tropical developing countries, where there have been a large number of recent and relatively well-documented attempts to reform sectoral policies. I then selected three tropical developing countries with broadly comparable sectoral and national circumstances, to see what attempts each had made to initiate reform in the forest sector. The second part of this dissertation will review attempts at reform initiation and instances of significant reform in these three countries. It will examine the initiation process to see how well differences in the commercial value of the forest resource, in national circumstances, and in the political resources and strategies of sectoral advocates explain variation across countries and over time within countries.

A. The forest sector in tropical countries since 1980

To examine the propositions on reform initiation, I have selected recent attempts to reform forest policies in tropical developing countries. I chose the forest sector in tropical countries for two reasons. First, among the major natural resource sectors in developing countries, the forestry sector in tropical countries has arguably been the target of the most well-coordinated and sustained reform attempts over the past fifteen years; consequently, there is a substantial amount of comparable data available for a number of countries on national policy failures, reform attempts, their content and implementation. Second, among the major natural resources, tropical forests produce perhaps the most obvious set of joint economic, environmental and social benefits: hardwoods, other woods and non-wood products whose extraction offers substantial economic rents and export earnings; positive environmental externalities from hydrology and climate regulation, as well as high scientific and amenity values from genetic, species and ecosystem diversity; and food, land and commodities for indigenous people and landless migrants, two groups at the bottom of the socio-economic ladder in virtually all tropical developing countries.

I have chosen the period since 1980 because it is in this period that international consensus emerged on the existence of major policy failures in the management of tropical forests, and on the types of reform needed to address these failures. As in other natural resource sectors, individual experts and advocates had begun to criticize the negative economic, environmental and social impacts of government forestry policies as early as the late 19th century. And as in other natural resource sectors, international concern about these impacts began to build in the 1960s.

Within the forestry sector, international concern was fueled by evidence that government policies were promoting boom-bust cycles in commercial forestry, by research that demonstrated the local and global ecological importance of tropical forests, by the failure of rural development strategies to stem forest encroachment by landless migrants, and by government-supported development projects that expropriated land and resources in ways that were clearly harmful to forest-dwelling indigenous peoples. It was not until the 1980s, however, that broad consensus emerged on the need to address all of these policy failures in the tropical forestry sector. In 1985, a consortium of multilateral and non-governmental organizations translated the growing consensus into the Tropical Forest Action Plan, an ambitious program for integrative policy reforms in the forest sector of tropical developing countries.

Reform episodes in the tropical forestry sector (including both successful and failed attempts) over the past fifteen years therefore provide a wide range of cross-national and subnational variation on the independent variables of most interest to us: the national circumstances under which sectoral advocates seek to promote reform; the political organization and resources of reform advocates, potential reform beneficiaries and their opponents; and the institutional arrangements for policy making and implementation.

B. Choosing comparable high-deforestation tropical countries

Among the large number of countries with some tropical forest cover (ninety, under FAO's current classification system (cf. FAO 1993)), I have selected a subset of countries which provide variation in the factors which I have argued should influence the initiation of reform, while controlling for other variables which may also influence the decision to initiate reform but are not germane to the argument. In the three countries I selected, deforestation rates circa 1980 had risen significantly above the average for tropical forest countries in their regions.¹ Government policy makers, as well as advocates and experts, were aware that current patterns of forest use were unsustainable, and that they were imposing significant economic, environmental and social costs on the polity. On the other hand, forest resources were still capable of producing a stream of economic, environmental and social benefits--it was not "too late" to do something to correct

¹ There is a great deal of uncertainty in estimates of tropical deforestation (Grainger 1993: Ch.5). FAO's two surveys of tropical forest resources (Lanly 1982, FAO 1993) provide the best set of comparable forest cover and deforestation data on a global scale, and I have used them for purposes of case selection.

policy failures. Finally, the countries were neither among the wealthiest nor among the poorest developing countries during the last fifteen years.

By choosing countries with known high rates of deforestation, but also significant remaining tropical forest resources, and broadly similar levels of economic development, I have sought to eliminate four possible competing explanations for variation in the initiation of forest policy reform that may well be true, but are not particularly interesting: 1) governments with abundant forest resources and consequently few conflicts among objectives in the forest sector will not initiate reform; 2) governments that are ignorant of problems in the forest sector will not initiate reform; 3) governments with few existing or remaining commercially valuable forest resources will not initiate reform, because the sector is too small to be policy-relevant at the national level; and 4) the wealthiest developing countries will have sufficient administrative and financial resources to initiate reform; the poorest developing countries will not.

The specific criteria I used to select countries were the following:

- 1) national deforestation rates which the widely publicized FAO/UNEP *Tropical Forest Resources Assessment* (Lanly 1982: 77-85, based on FAO/UNEP 1981a,b,c) identified as substantially above the regional averages for Africa, Asia and Latin America circa 1980;²
- 2) closed forest cover between 10% and 40% of total land area, and at least 1 million hectares absolute area circa 1980 (calculated from FAO/UNEP 1981a,b,c as reproduced in UNEP 1987: 156-58);³
- 3) industrial roundwood production of at least 0.5 million cubic meters circa 1980 (WRI 1994, calculated from FAO *Forest Products* (FAO various));
- 4) GNP per capita between \$400 and \$2000 circa 1980 (World Bank 1982).⁴

² FAO's 1982 report (Lanly 1982: 77) found that the global average deforestation rate for closed forests for the period 1976-80 was 0.6% per year, with only small variation across regions. I used 1% as the lower bound deforestation rate for defining "high deforestation" countries; I selected countries above this threshold based on the other three selection criteria.

³ The choice of the 10-40% range is based on FAO's finding (Lanly 1982: 46) that the average for closed forest cover as a percentage of national land area ranged from 10% in tropical Africa to 40% in Latin America. I used this finding to set upper and lower bounds on forest resources. As of the early 1980s, any tropical country with more than 40% closed forest cover had relatively substantial forest resources; any country with less than 10% cover had relatively scant forest resources. The choice of 1 million hectares as a lower bound for absolute forest area ensures broad comparability in the scale of national forest sector management institutions and challenges.

⁴ The World Bank's 1982 World Development Report (World Bank 1982) defined middle income developing countries as those with GNP per capita between \$400 and \$4500.

These criteria yielded seven high-deforestation, lower-middle income tropical countries as candidates for comparison: Cote D'Ivoire, Costa Rica, Thailand, Nicaragua, Honduras, Philippines and Mexico. Preliminary research on these seven countries indicated that four had few reform episodes and virtually no successes: Cote D'Ivoire, Nicaragua, Honduras and Mexico.⁵ Three had a number of initiation episodes and some successes in reform initiation: Costa Rica, Thailand and the Philippines. The four countries with few initiation attempts and no successes were not of interest not only because they provided no variation on the dependent variable (success in initiating reform), but also because the lack of variation was generally due to the absence of organized advocates for reform. Documenting this unsurprising result would not materially advance our understanding of the problem of natural resource policy reform.⁶

In contrast, the three countries where reformers had some successes also had a number of failures, thereby providing adequate variation on the dependent variable. Furthermore, though these three countries were broadly similar in the role of the forest sector in the national political economy (see Table 3.1), they also exhibited important differences in the causal factors that I argue are the most important influences on reform initiation.

Table 3.1 High-deforestation tropical developing countries for comparison
(All figures circa 1980)

| | Deforestation rate (percent of forest area per year) | Closed forest cover (percent of land area) | Closed forest area (million hectares) | Industrial Roundwood Production (million cu. m. per year) | GNP per capita (US dollars) |
|-------------|---|---|--|--|--------------------------------|
| Costa Rica | 3.6 | 32 | 1.6 | 1.2 | 1,730 |
| Thailand | 3 | 18 | 9.2 | 4.4 | 670 |
| Philippines | 1-3 ¹ | 32 | 9.5 | 8.5 | 690 |

¹ There was substantial disagreement among experts and policymakers on the deforestation rate in the Philippines in the early 1980s (Kummer 1992: 52-60).

⁵ This preliminary research included a review of secondary literature on each country's national political economy during the 1980s and 1990s; of major secondary sources on forest policy for each country; and of the Tropical Forest Action Plans for each country. I also interviewed academic and consulting experts on Central American and West African forest policy.

⁶ On Cote d'Ivoire, see FAO (1988); Grut et al. (1991); and Heath (1993). On the Central American countries, see CCAD (1991); FAO (1993b); Healy (1989); Leonard (1987); Utting (1993); and Weinberg (1991). On Mexico, see also SARH (1994) Cortez Ruiz (1993) and Silva (1997). On Nicaragua, see also BID (1982) and Castilleja (1994). On Honduras, see also Aceituno (1994) and Stanley (1991).

These factors include the level and trend in the commercial value of forest resources, the occurrence of national crises and political realignments, the relative emphasis on efficiency, environmental and equity concerns during crises and realignments, and the relative influence of advocates for different sectoral reform goals during crises and realignments. I will define indicators for each of the causal factors, as well as indicators for instances of significant reform, in the next section of this chapter.

III. Operationalizing the causal model: indicators for dependent and independent variables

To find out how much explanatory power the general propositions about natural resource policy reform actually have, we must translate the propositions into "observable implications of theory"--a set of causal variables whose interaction can be documented in a specific, "real-world" setting (cf. King et al. 1994: 109-112). This section translates the propositions into a set of variables whose states can be observed and measured (in qualitative, binary and ordinal, if not quantitative terms).

A. Defining the Forest Sector

So far, we have talked in general terms about natural resource policies, and about efficiency-, environmental- and equity-oriented reforms, illustrating these concepts with examples drawn from several natural resource sectors. This section defines four "policy subsectors" in the forestry sector which may be affected by policy reform. It then defines efficiency-, environmental- and equity-oriented reforms for each subsector. The scheme for defining and categorizing policies and reforms is an attempt to synthesize the work of a number of experts and advocates of forest policy reform.⁷

⁷ The criteria for efficiency-oriented reforms reflect work by Kishor and Constantino (1994a); Repetto and Gillis (1988d); and Vincent and Panayotou (1994) among others. The criteria for equity-oriented forest policy reforms reflect work by Arnold (1991); Lynch and Talbott (1995); and Poffenberger (1990) among others. The criteria for environmental reforms reflect work by McNeeley et al. (1989); Miller and Tangle (1991); and Myers (1984) among others. The criteria also draw from general works by Grainger (1993); World Bank (1991); and WRI et al. (1985), among others.

To begin, we will break down forestry sector policies into four commonly recognized policy subsectors: commercial, conservation and community forestry policies, and forest land allocation policies.

Commercial forestry policies govern the designation of forests for commercial use, and the activities of private (and occasionally public) firms who extract timber and non-timber forest products (NTFPs, e.g. bamboo, rattan, resins) for commercial sale.

Conservation forestry policies govern the designation of forest areas for non-extractive use and strict protection, and the activities of people living in and around conservation areas, as well as visitors (primarily scientists and tourists).

Community forestry policies govern the designation of forest areas for use by people living in and adjacent to them, and the activities of those local households and local user groups (informal or formal), particularly their rights to extract timber and NTFPs, and to clear forest areas for temporary or permanent agriculture and for settlement.

Most forest management agencies in developing countries have established sub-sectoral policies in each of these areas. In some countries, there are also *forest land allocation policies*, which govern decisions about whether land formally designated for one type of forestry use (i.e. commercial, conservation or community forestry) can be transferred to another forestry use; these policies may also govern decisions about whether land formally designated as "forest" (whether or not it actually has tree cover) can be transferred to other agencies or to private actors for alternative uses, particularly agriculture, grazing and settlement. Because forest land allocation policies raise intersectoral issues, and because they are sometimes not under the control of national forest management agencies, they are not always considered forest policies. Because forest land allocation has been a contentious issue in many reform episodes, and because it raises major efficiency, environmental and equity concerns, we will consider it as an aspect of forest policy.

When advocates talk about reforming forest policy, they may mean one of two things: changing the policies that govern activities within a subsector, or changing policies governing the allocation of forest land among subsectors (or between forest and non-forest uses). For example, advocates whose main concern is improving efficiency may focus their attention on the commercial forestry subsector, lobbying for greater differentiation in the taxes commercial firms

pay on logs from species of different value, or for the introduction of an auction system for commercial concessions. Alternatively, they may advocate a change in forest land allocation criteria, e.g. to allow commercial logging in primary forests in cases where the economic returns from logging can be shown to exceed the returns from non-extractive use. We will consider reforms that reallocate forest land, either between alternative forest uses or between forest and non-forest use, as changes in forest land allocation policies.

B. Efficiency-, environment- and equity-oriented reforms

We have now distinguished four forest policy subsectors. By the mid-1980s, forestry experts and advocates had identified policy failures and proposed reforms for each subsector. Table 3.2 defines forest policy reforms in each subsector. It reflects broad consensus among experts and advocates on the major efficiency, environmental and equity reforms that might be pursued in the four forest policy subsectors. Most of the recent debate among experts and advocates concerns the relative priority that policy makers should give to each reform goal within each of the four subsectors in particular countries.

In the empirical case studies, we will use this definitional list to classify proposed and enacted reforms in each subsector as efficiency-, environment- or equity-oriented. In episodes where more than one type of reform is enacted, we will present the list of enacted reforms and make a qualitative argument about the relative emphasis on efficiency, environmental and equity goals.

Table 3.2 Forest Policy Reforms by Objective and Subsector

| | Efficiency | Environmental protection | Equity |
|----------------------------|---|---|---|
| Commercial forestry | <p><u>Natural Forest Production</u></p> <ul style="list-style-type: none"> -auction concession contracts or raise license fees to ensure government captures resource rents -lengthen concession terms and allow resale of concession rights to encourage long-run efficiency in private investment and management -stimulate NTFP production through harvesting and marketing assistance <p><u>Plantation Production</u></p> <ul style="list-style-type: none"> -stimulate plantation timber production through planting, harvesting and marketing assistance <p><u>Wood Processing</u></p> <ul style="list-style-type: none"> -eliminate subsidies for processing firms -eliminate regulations on product transport <p><u>Wood Products Trade</u></p> <ul style="list-style-type: none"> -eliminate import and export bans/licences/taxes/subsidies on raw and finished products | <p><u>Natural Forest Production</u></p> <ul style="list-style-type: none"> -prohibit logging in environmentally sensitive areas within concessions (primary forests, steep slopes, high elevations, upper watersheds) -restrict logging methods, equipment and infrastructure and set charges (differentiated by species) to minimize damage to unharvested trees and forest ecosystems -restrict NTFP methods, equipment to ensure natural regeneration -require loggers to reforest or pay charges to government reforestation funds -make concessions contingent on adherence to environmental regulations <p><u>Plantation Production</u></p> <ul style="list-style-type: none"> -require assessment of plantation impacts on water table, erosion, biodiversity -use technical assistance to promote intercropping, use of indigenous species | <p><u>Natural Forest Production</u></p> <ul style="list-style-type: none"> -review and resolve indigenous and other local residents' boundary claims before issuing logging concessions -require loggers to consult with local residents on plans for logging areas, methods and infrastructure -require loggers to contribute to local community development (via logging jobs, purchase of local goods/services, tax payments to local government/ community fund) <p><u>Plantation Production</u></p> <ul style="list-style-type: none"> -review and resolve local boundary claims before issuing plantation contracts/titles -require plantation managers to consult with local residents on planting areas, methods and infrastructure; impacts on water and soil resources |

| | Efficiency | Environmental protection | Equity |
|-----------------------|--|--|--|
| Conservation forestry | <p>Parks/sanctuaries</p> <ul style="list-style-type: none"> -create buffer zones with adequate economic potential to minimize incentives for encroachment on core areas -reduce protection costs by investing in local income diversification (via farm productivity, off-farm and conservation employment) -set park and sanctuary visitor fees to recover investment and operating costs -increase beneficiary cost-sharing through ecotourism and private voluntary contributions <p>Watersheds</p> <ul style="list-style-type: none"> -create incentives for watershed conservation by subsidizing reforestation up to the economic value of water provision and/or agricultural production costs avoided | <p>Parks/sanctuaries</p> <ul style="list-style-type: none"> -prohibit extractive uses, roads and settlements in strict protection areas; limit use, infrastructure, settlement in buffer zones -increase funding for protection, study and management activities in protected areas <p>Watersheds</p> <ul style="list-style-type: none"> -prohibit settlement, logging, road-building and agricultural conversion in upper watersheds -increase reforestation in degraded upper watersheds | <p>Parks/sanctuaries</p> <ul style="list-style-type: none"> -review and resolve all local resident claims before designating protected area boundaries -involve local residents in core/buffer zone delineation and rule-making on permitted and restricted uses -require local resident representation on area management body -give local residents priority for protection/tourism jobs <p>Watersheds</p> <ul style="list-style-type: none"> -review and resolve all local boundary claims before designating protected watershed areas -involve local residents in boundary delineation and rule-making on permitted and restricted uses |

| | Efficiency | Environmental protection | Equity |
|--------------------|--|--|--|
| Community forestry | <p><u>Tenure</u></p> <ul style="list-style-type: none"> -provide secure and transferable tenure rights (individual and collective) to maximize incentives for long-run management efficiency <p><u>Use Rights</u></p> <ul style="list-style-type: none"> -negotiate conditional use rights with local users to internalize environmental externalities and minimize monitoring and enforcement costs <p><u>Management</u></p> <ul style="list-style-type: none"> -assist tenured local users to determine optimal mix of forest products (timber, NTFPs, environmental services) given available inputs (land, labor, credit, knowledge) and markets (local, regional, national, international) -assist local users to improve or create local systems of rules and rewards for monitoring and protecting jointly-held forest areas | <p><u>Tenure</u></p> <ul style="list-style-type: none"> -make household and communal tenure conditional on commitment protect forest area from fire, unauthorized use and occupancy <p><u>Use Rights</u></p> <ul style="list-style-type: none"> -limit use rights in sensitive areas (e.g. steep slopes, eroded areas) -restrict logging and NTFP collection methods and amounts to protect sensitive species and ecosystems -require local users to undertake reforestation and assisted natural regeneration in degraded areas <p><u>Management</u></p> <ul style="list-style-type: none"> -require periodic oversight of local users by qualified foresters/ecologists -educate local community to increase commitment to environmental conservation | <p><u>Tenure</u></p> <ul style="list-style-type: none"> -legally recognize prior rights of indigenous people and long-settled migrants to own, occupy and use forest land and resources -treat residents who meet occupancy criteria as equal parties in negotiating terms and conditions of tenure <p><u>Use Rights</u></p> <ul style="list-style-type: none"> -provide secure title to land and resources, with zoning and use restrictions only where necessary to internalize externalities <p><u>Management</u></p> <ul style="list-style-type: none"> -authorize local residents to form user groups and management committees to make decisions on use of communally-held forest areas; provide organizing and technical assistance to committees -allow local committees to resolve users' internal disputes; require use of formal government procedures only when one or more parties appeals decisions of local committee |

| | Efficiency | Environmental protection | Equity |
|------------------------|--|---|---|
| Forest land allocation | <p>Subsectoral</p> <ul style="list-style-type: none"> -use best available information about economic value of forests (timber and NTFP production, environmental services and amenity value) under different conditions (forest type, topography, users, uses and markets) to set national guidelines for forest allocation (e.g. logging in accessible primary and well-stocked secondary forest; conservation in remaining low-accessibility primary forest; community management in inadequately stocked secondary and degraded areas) <p>Intersectoral</p> <ul style="list-style-type: none"> -authorize conversion of forest land to agricultural, pastoral, or commercial use when NPV of economic return from such use (including estimates of environmental externalities) is greater than return from continued use as forest | <p>Subsectoral</p> <ul style="list-style-type: none"> -use best available ecological information (e.g. representative national ecosystems and their condition; species diversity and endemism within each ecosystem) to develop priority list for national protected areas system -use best available environmental service information (e.g. watershed classification based on water and hydropower provision) to prioritize watersheds for protection and reforestation -restrict commercial and community use to areas that have low ecological/ watershed protection priority <p>Intersectoral</p> <ul style="list-style-type: none"> -minimize conversion of forest to non-forest uses except in cases where conversion of low-environmental value area will reduce pressure on adjacent high-value area | <p>Subsectoral</p> <ul style="list-style-type: none"> -use best available information on indigenous and migrant settlement in forest areas, and minimum length of occupancy rule (e.g. 10 years of continuous residence) as basis for recognizing local residents' tenure and use rights -allow commercial and conservation uses only in areas where there are no tenured residents, or in areas where local residents (or their agreed representatives) voluntarily exchange their tenure/use rights for compensation <p>Intersectoral</p> <ul style="list-style-type: none"> -allow tenured local residents/joint owners to convert areas they determine to be suitable for non-forest use, and which do not impose externalities on outsiders -allow outside claimants (government or private) to convert forest land not subject to local claims only after consultation with local residents to minimize conversion externalities and compensate remaining externalities (e.g. loss of groundwater, soil erosion etc.) |

C. Successful and unsuccessful attempts to initiate reform

When advocates, experts or policy makers make a formal proposal to change a forest policy (i.e. they present it as a written document, as oral testimony or argument in a national policy making institution, generally the national legislature, the office of the head of government, or the national agency tasked with forest management), and when that proposal closely resembles one or more of the "ideal type" policy reforms we listed above, that proposal is an instance of an attempt to initiate reform. When policy makers formally enact (as a law, a presidential or ministerial order, or a forest management agency regulation) a proposed reform or a modified version that maintains its essential elements, it is an instance of successful reform initiation. A proposed reform that is not enacted is an instance of an unsuccessful attempt at reform initiation. A proposed reform that is so greatly modified during the policy making process that the enacted version does not include the efficiency-, environmental- or equity-enhancing measures initially proposed is also an instance of an unsuccessful attempt at reform initiation.

In gathering data on attempts to initiate reform, we have maintained a relatively high definitional threshold for initiation attempts. Discussions about possible reforms among senior officials, or between officials and advocates, even if formally recorded, do not necessarily constitute efforts to initiate reform. We have focused on reform initiation attempts that were widely publicized and recognized as significant attempts by both governmental and non-governmental political actors.

D. Factors affecting the success of reform initiation

The preceding chapter advanced two propositions about the initiation of reform:

1. Under "business as usual" conditions, advocates will seldom be able to initiate reforms until the commercial value of natural resource stocks and flows has declined to a point at which status quo beneficiaries no longer find it worthwhile to defend their privileges.
2. Advocates for particular sectoral reforms (i.e. efficiency, environmental or equity) are most likely to succeed in initiating reforms at moments of crisis in the national political economy and moments of national political realignment which favor their particular policy goals.

Embedded in these propositions are three causal factors:

- the commercial value of the resource to status quo beneficiaries;
- the occurrence of national crisis or political realignment; and
- the match between crisis or realignment and the reform goals of sectoral advocates.

The causal pathway that connects changes in these factors to changes in reformers' success in initiating reform is the strategic interaction of groups of advocates with each other and with opponents of reform. In this strategic interaction, each group seeks to use the political resources at its disposal to advance its interests. To trace this interaction, we need to know

- the institutional positions of key status quo beneficiaries (i.e. their formal authority to participate in and/or decide the content of policy), their political organization (i.e. the ability of those with a shared interest in a specific policy outcome to coordinate their political activities) and their other political resources (e.g. money, votes, capacity for mass action and controlled violence, ability to convey legitimacy to political leaders), and their strategies for using these resources to build coalitions strong enough to maintain the status quo; and
- the institutional positions, political organization and other political resources of leading advocates for efficiency, environmental and equity reforms, and their strategies for building coalitions strong enough to enact their preferred reforms.

To operationalize the three primary causal factors, I have defined indicators for each factor and gathered data on each indicator. To trace the causal pathways, I have also gathered data on the political resources, strategies and strategic interaction of advocates and status quo beneficiaries. These indicators and methods are described in more detail below.

1. Changes in commercial value of forest resources to status quo beneficiaries

According to the propositions I have advanced, until the rents to commercial logging and wood processing firms and their governmental patrons and clients from status quo policies have been largely dissipated, substantial reform of any kind is very unlikely. As the rents derived from resource exploitation decline, we should see a corresponding decline in formal lobbying by industry firms and trade associations, and a decline in the informal influence of key logging

patrons and clients in business and government. In the absence of exogenous (i.e. national rather than strictly sectoral) crisis or realignment, we should see reform only after the profits available from forest exploitation have declined to levels not substantially higher than those available in other sectors of the economy. When profitability, organized lobbying and informal influence all appear to have declined, we should expect a significant increase in the success of attempts to initiate reform. To explore this proposition, I have defined and gathered data on the following causal factors.

1.1) **Commercial value:** levels and trends in industrial roundwood and sawnwood production and trade; investment in sawmills; academic, trade and business journal reports on profitability.

1.2) **status quo beneficiary interest:** changes in organized lobbying by trade associations and prominent individuals; changes in informal lobbying and offers of patronage to policy makers by status quo beneficiaries to maintain current policies or exempt them from reforms, as reported in journalistic accounts and interviews with private forest sector investors and government forest management agency officials.

1.3) **Causal inference:** To determine whether and how changes in the commercial value of the resource to status quo beneficiaries affected the potential for reform, we will examine changes in the observed behavior and inferred interests of status quo beneficiaries, and see how closely these changes match changes in the commercial value of forest resources. When the membership and budget of status quo beneficiary trade organizations declines, lobbying in defense of current policies that are widely agreed to be the source of financial and political benefits for status quo beneficiaries declines, and informed observers of patronage networks report a decline in the financial and political value of traditional patron-client relationships at national and subnational levels, we can infer a decline in status quo beneficiary interest in protecting the policy status quo.

When these changes follow declines in the commercial value of the resource, and when informed observers cite the decline in the commercial value of the resource as an important cause of the decline in status quo beneficiary interest, we can infer that the decline in the commercial value of the resource is a primary cause of the change in beneficiary interest. When reforms are initiated after both the commercial value of the resource and organized lobbying by status quo

beneficiaries has significantly decreased, we can infer that the decline in status quo beneficiary interest is a primary factor facilitating the initiation of reform.

2. Occurrence of national crisis or political realignment

In cases where substantial profits can still be made in the forest sector under status quo policies, but national crises or realignments create windows of opportunity for sectoral reforms, we expect that advocates for efficiency, environmental and equity reforms will seek to convince national political leaders and senior policy makers that reforms in the forestry sector can contribute to the achievement of national reform goals. According to the propositions I have advanced, those advocates whose goals most closely match those of national leaders during periods of crisis or realignment should be most likely to succeed in initiating their preferred reforms. Intervening factors, particularly the institutional positions and lobbying resources of advocates for competing reform goals, and the positions and lobbying resources of reform opponents, may play a decisive role in determining whether advocates whose goals are "objectively" favored by the national circumstances actually succeed.⁸

Indicators: To determine whether crisis or realignment has occurred, and to define crises and realignments as predominantly economic, environmental or equity-related, I have defined and gathered data on the following indicators:

2.1) economic crisis: in one year), increase in central bank interest rates (more than 10% higher than current rates), currency devaluation (more than 10% of current value), and/or privatization of public enterprises (more than 10% of the asset value of all public enterprises) in order to deal with balance of payments or budget deficit or acceleration of domestic inflation.

2.2) environmental crisis: announcement by head of government, responsible cabinet member(s), and/or leader(s) of national legislature of intent to create and/or dramatically expand laws and programs to protect the natural environment, in response to widely publicized floods, fires, landslides, droughts, severe land degradation, and/or public protests by groups affected by one or more of these environmental problems.

⁸ In cases where commercial profitability has declined but substantial reforms have not yet been initiated, we still expect that national crisis or political realignment will favor advocates whose goals match those of national leaders, but we do not expect determined lobbying by status quo beneficiaries. Instead, we expect political conflict among advocates for competing reform goals during the policy making phase, rather than conflict between advocates and status quo beneficiaries during the reform initiation phase.

2.3) **equity crisis**: announcement by head of government, responsible cabinet member(s), and/or leader(s) of national legislature of intent to extend political rights (e.g. to vote, form political parties, govern at regional level with substantial autonomy) and/or economic benefits (e.g. land ownership, wages, social service programs) for one or more national or regional social groups (from urban middle class to rural poor to indigenous people) in response to armed insurgency, violent or peaceful demonstrations, or political campaigns led by representatives of self-identified marginalized or disadvantaged groups.

2.4) **political realignment**: in democratic regimes, change of governing party or substantial change in composition of multi-party coalition (e.g. withdrawal of parties holding several important cabinet posts); in semi- and non-democratic regimes, change of senior appointed officials (ministerial level) reflecting realignment within ruling elite/family.

2.4.1) **efficiency-oriented realignment**: post-realignment head of government, responsible cabinet member(s) and/or senior legislative leader(s) favor substantial economic policy changes of the type (though not necessarily of the same magnitude) that would be taken under conditions of economic crisis (cf. 2.1 above).

2.4.2) **environment-oriented realignment**: post-realignment head of government, responsible cabinet member(s) and/or senior legislative leader(s) favor substantial environmental policy changes of the type (though not necessarily of the same magnitude) that would be taken under conditions of environmental crisis (cf. 2.2 above).

2.4.3) **equity-oriented realignment**: post-realignment head of government, responsible cabinet member(s) and/or senior legislative leader(s) favor substantial extension of political rights and/or economic benefits to social protest groups of the type (though not necessarily of the same magnitude) that would be extended under conditions of equity crisis (cf. 2.3 above).

The case studies of attempts at reform initiation use these crisis and realignment indicators to identify instances of crisis and realignment, and to label them as efficiency-, environment- or equity-oriented. It is possible, of course, for a government to face more than one type of crisis, or undergo more than one type of realignment, at the same time. For example, the Aquino government faced both economic and equity crises in 1986. When a government faces a crisis or undergoes a realignment that gives priority to two or more reform goals at the same time, the case discussion notes this fact and traces its implications for sectoral advocates.

3. Match between crisis or realignment and advocates' policy goals

To determine the match between advocates' goals and the circumstances of crisis or realignment, the empirical chapters first use the typology laid out above to define crises and realignments as efficiency-, environment- or equity-oriented. They then identify the most prominent advocates (including both individuals and institutions) of forest policy reform in each country, and the proposals they advanced during moments of crisis and realignment. Using the typology of forest policy reforms by objective and subsector, the chapters then classify advocates and their goals as efficiency-, environment- or equity-oriented. In cases where advocates have advanced reform proposals embracing more than one policy goal, they are defined as advocates for multiple goals. Those advocates whose goals are most closely aligned with those of national political leaders during moments of crisis and realignment are, according to the propositions, most likely to succeed in initiating forest policy reforms that meet their goals.

4. Causal pathways: influence of advocacy and patronage networks on policy makers' decisions to initiate reform

At the beginning of this discussion on inferring causes of reform initiation, we noted that the political strategies and resources of reform advocates and opponents can act as intervening variables in reform initiation. Differences in resources and strategies can enhance or undermine the fit between the goals of forest policy reform advocates and those of national leaders during moments of crisis and realignment. To see how great an effect these differences have in particular cases, the empirical chapters first review the evidence on reforms which were formally initiated and successfully enacted at moments of crisis and realignment. From this "first cut," we can see whether the advocates whose goals were most closely aligned with those of national political leaders during moments of crisis or realignment were in fact more successful in initiating and enacting the reforms they favored than advocates for other goals.

To explain the congruence or divergence between national reform goals and sectoral reforms enacted, we will trace the strategic interaction among advocates trying to advance potentially competing reform goals, and between advocates and reform opponents trying to block them. The empirical chapters describe the institutional positions (i.e. formal authority to participate in and/or decide the content of policy), political organization (i.e. the ability of those

with a shared interest in a specific policy outcome to coordinate their political activities) and other political resources (i.e. votes, money, capacity for direct action, ability to convey legitimacy to political leaders) of key advocates for efficiency, environmental and equity goals, and describe their strategies for 1) coordinating political activities with their counterparts in other institutions within the forestry sector, 2) presenting the case for sectoral reform to national political leaders and senior policy makers with authority extending beyond the forestry sector, and offering political resources in exchange for national leaders' support, and 3) forming alliances with sectoral and national advocates for other reform goals.

The empirical chapters also identify key status quo beneficiaries, their institutional positions and other political resources, and their strategies for opposing reforms that threatened their benefits, with particular attention to their use of financial and political resources to influence the decisions of sectoral and national policy makers. The primary sources of data on strategic interaction are interviews with process participants (including reform advocates and opponents and senior policy makers) and informed observers, policy and strategy documents prepared by participants and accounts written by informed observers.

The second part of the dissertation will apply the methods described above to analyze the initiation of policy reforms in three high-deforestation tropical countries. The empirical chapters review the fit between national circumstances of crisis or political realignment, the stated goals of reform advocates, and the reforms actually enacted. They then trace the strategic interaction among reformers and reform opponents (particularly sectoral advocates' attempt to connect their reform goals to national priorities, and their efforts to mobilize like-minded allies at both the sectoral and national levels through informal advocacy networks), to see whether and how the political strategies and resources of sectoral advocates affect national policy makers' decisions to initiate reform at the sectoral level.

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Introduction to Part II

Initiating Forest Policy Reforms: Summary of Findings

The second part of this thesis investigates the propositions about natural resource policy reform initiation that were developed in Chapter 2:

- 1.1 Under "business as usual" conditions (i.e. in the absence of national crisis or political realignment), reform advocates will seldom be able to initiate reforms until the commercial value of a natural resource stock or flow has declined to a point at which status quo beneficiaries no longer find it worthwhile to defend their privileged access to it.
- 1.2 Advocates for particular sectoral reforms (i.e. economic efficiency, environmental protection or social equity) are most likely to succeed in initiating reforms at moments of crisis in the national political economy and moments of national political realignment which favor their particular policy goals.

Chapter 3 identified three causal factors embedded in these propositions:

- the occurrence of national crisis or political realignment;
- the match between crisis or realignment and the reform goals of sectoral advocates; and
- the commercial value of the resource to status quo beneficiaries.

It argued that these causal factors do not determine outcomes, but act as opportunities and constraints for reform advocates and status quo beneficiaries. To explain the timing, content and success of reforms, we need to know not only the status of the three causal factors identified above, but also

- the institutional positions of key status quo beneficiaries (i.e. their formal authority to participate in and/or decide the content of policy), their other political resources (i.e. their capacity for collective action and the money, votes, legitimacy and other assets they can deploy to affect the policy process), and their strategies for using these resources to maintain the status quo; and
- the institutional positions, political organization and other political resources of leading advocates for economic, environmental and social reforms, and their strategies for building coalitions strong enough to enact their preferred reforms.

To probe the validity of the propositions and the causal mechanisms underlying them, I have chosen cases of reform initiation from the tropical forest sector. As discussed in Chapter 3, the tropical forest sector presents an appropriate field for investigating propositions on natural

resource policy reform initiation in developing countries for two reasons: the availability of recent data and the broad consensus among expert observers on existence of serious policy failures and on the reforms that would be necessary to promote economic efficiency, environmental protection and social equity goals.

The following table presents the findings from the reform initiation case studies in tabular form. The findings generally support the propositions on reform initiation. When reform advocates have substantial political resources and favorable national circumstances (the top row of the table), their reform initiatives generally succeed. When, on the other hand, status quo beneficiaries have substantial political resources and value the status quo highly (the left column), they are usually able to defeat reform initiatives. In the intermediate cases (the middle rows and columns, and particularly the central cell), results are predictably mixed. The case analyses detail a number of ways in which the issue-framing and coalition-building strategies of reformers and status quo beneficiaries can be especially important in the intermediate cases.

Table A: Reform Initiative Successes and Failures as a Function of National Circumstances, Political Resources and Status Quo Benefits
(compiled from Tables 1-3)

| Reform Advocates | Status Quo Beneficiaries | | |
|--|--|---|---|
| | High political resources and SQ benefits | Medium/mixed political resources and SQ benefits | Low political resources and SQ benefits |
| High political resources and favorable national circumstances | 1 Failure (CR6*) | 12 Successes (P5, P7, P12, P13, T1, T4, T5, T6, CR1, CR2, CR3, CR9) | 4 Successes (P3, P6, CR5, CR8) |
| Medium/mixed political resources and national circumstances | 2 Failures (P9, CR7) | 5 Successes (P2, P8, P10, T3, CR4) 4 Failures (P1, P4, P11, T7) | |
| Low political resources and unfavorable national circumstances | 1 Failure (T2) | | |

* Letter-number codes correspond to reform episodes as defined in Tables 1-3 (e.g. CR6=Costa Rica reform episode number 6).

The next three chapters examine the initiation of forest policy reforms in three tropical developing countries: the Philippines, Thailand and Costa Rica. These three countries had broadly comparable (as defined in Chapter 3) tropical forest sector resources, deforestation rates and underlying patterns of forest exploitation at the beginning of the 1980s. They differed substantially in the political and institutional context for reform initiatives, ensuring substantial variation on the independent variables of interest for this study. The remainder of this introduction and Tables 1, 2 and 3 briefly summarize the argument presented in the next three chapters.

1. Forest sector resources, problems and policy failures

In all three countries, deforestation was being driven by unsustainable commercial logging, rapid migration into logged-over areas by landless farmers, conversion of degraded forest areas to agriculture and ranching. Underlying these trends were forest sector and land use policies that allowed wealthy private sector investors and their patrons and clients in government to earn substantial financial returns by logging forests and converting them to other uses. The same policies generated substantial economic, environmental and social costs for less influential forest user groups and by society as a whole. Finally, by the early 1980s domestic and international advocates for efficiency, equity and environmental goals were calling for reforms to address these policy failures in all three countries.

2. National circumstances

Though the Philippines, Thailand and Costa Rica had broadly comparable forest sector problems, their national political circumstances in the mid-1980s were quite dissimilar. The Philippines was a "neo-patrimonial" dictatorship (cf. Hutchcroft 1991) facing economic and political crises that eventually toppled the Marcos regime. Thailand was a "bureaucratic polity" (cf. Riggs 1966) undertaking a gradual process of economic and political liberalization in response to economic and political challenges that did not directly threaten the survival of the regime. Costa Rica was a stable two-party democracy; though it faced the most serious economic crisis of the postwar era during the early 1980s, it weathered this crisis without any serious threat to the legitimacy of its democratic capitalist institutions.

From the mid-1980s through the mid-1990s, each country went through several national political realignments and crises. These national political shifts tended to favor a particular macro-policy objective: economic efficiency and growth, social equity or (more rarely) environmental protection; in some cases, they represented "backsliding" from previous reform commitments in favor of the *status quo ante*. National political shifts had a two-part influence on forest sector

reform initiatives. First, they affected sectoral reformers' and status quo beneficiaries' access to and influence on national political leaders. Second, they framed and sometimes mandated policy goals for sectoral actors, particularly forest sector agency officials.

Broadly speaking, national circumstances in the Philippines favored the status quo from 1980 to 1985, the last years of the Marcos regime. The "people power" government of Corazon Aquino favored equity-oriented reforms in 1986-87, accepted a status quo Congress from 1987 to 1989, and initiated efficiency-oriented reforms from 1990 to 1992 in the face of renewed economic crisis. Under her successor, Fidel Ramos, the government pursued efficiency-oriented reforms from 1992-94. Ramos responded to criticism of his government's failure to reduce poverty and income inequality by initiating new equity-oriented reforms in 1994.

In Thailand, national circumstances favored efficiency-oriented reforms from 1980 through 1988, as a partly democratic, military-dominated government under the leadership of Prime Minister Prem pursued economic liberalization. From 1985 through 1991, political liberalization also began to allow advocates for equity and environmental reforms to influence national politics. During the military government of 1991-92, efficiency and environmental advocates had support from military leaders and civilian technocrats. When civilian protests and royal intervention forced the military to relinquish power in 1992, a new civilian coalition formed a government with a mandate to improve the lot of small farmers through land reform. This equity-oriented coalition was forced from power in 1995 after a series of land reform scandals. It was replaced by a status quo coalition government that enhanced the Thai government's reputation for venality; this coalition fell in 1996.

In Costa Rica, the 1986 election of Oscar Arias Sanchez to the Presidency brought a national realignment in favor of equity and environmental goals, and also toward maintenance of a strong welfare state, after a period of economic austerity under his predecessor. In 1990, the conservative Partido Unidad Social Cristiana under Rafael Angel Calderon won power, shifting national policy goals in favor of continuing economic liberalization and privatization. The 1994 victory of Jose Maria Figueres returned the social democratic PLN to power, this time with a mandate to integrate economic, environmental and social goals in national policies.

3. Sectoral actors and reform initiatives

The sectoral context for reform was as important as national circumstances in shaping the timing, content and success of reform initiatives. In particular, the value of forest sector resources to status quo beneficiaries, their influence on sectoral policy making institutions, and the relative influence of advocates for economic, social and environmental reforms directly affected the reform process and its outcomes.

The Philippines: In the Philippines, the commercial value of forest resources declined steadily from 1980 through 1996. Furthermore, the small group of Marcos cronies who had benefited most from Marcos' use of the forests for political patronage lost most of their political influence when Marcos was ousted. Nevertheless, many provincial and a few national political figures retained control of logging concessions under the Aquino government, and they continued to influence forest policy through the Congress until the early 1990s.

Under Marcos, there were virtually no reformers in positions of power until economic crisis forced the regime to raise tax revenues from the forest sector, and the technocrat appointed to collect taxes as Minister of Natural Resources failed to compel Marcos cronies to contribute even a modest proportion of their profits to the treasury.

Under Aquino, the Secretary of the renamed Department of Environment and Natural Resources led a broad and sometimes internally divided reform coalition of senior DENR officials, domestic NGOs and international aid agencies. Taking advantage of favorable national circumstances and circumventing Congressional opposition, this reform coalition gained autonomy to make sectoral regulations through DENR, broke the hold of Marcos cronies on the sector and initiated a number of equity- and environment-oriented reforms. The reformers framed their goals as "giving the forests back to the people," an equity orientation that fit well with the Aquino administration's national priorities. Initially, environmental and economic goals were lower priorities for the reform coalition, but as the Philippine environmental movement gained political influence, environmental issues rose to prominence as well.

From 1992 to 1995, the locus of reform initiatives in the Philippines shifted from the sectoral to the national level. President Ramos appointed an ineffective DENR Secretary, Angel Alcala. Senior civil servants in DENR and their allies in NGOs and aid agencies were able to consolidate most of the reforms initiated under the previous administration, but had difficulty advancing new initiatives without the combination of favorable national circumstances and strong sectoral leadership. DENR officials did initiate new efficiency-oriented reforms in the commercial forestry subsector. Though these reforms fit national priorities well, DENR's leadership was vulnerable to informal influence by commercial logging firms. These firms undermined DENR's attempts to create a competitive bidding system for commercial logging concessions.

Given weak leadership within the sector, the most successful initiative in this period came from the national level. When the Ramos administration came under pressure to address persistent social inequities, it created a Social Reform Agenda to target government resources on disadvantaged groups. It encouraged DENR to recognize indigenous peoples' ancestral domain claims, building on work that had started under the previous DENR leadership. but had not been a

DENR priority since.

Thailand: In Thailand as in the Philippines, most hardwood forests had been stripped of commercially valuable trees by the early 1980s. Pockets of well-stocked forest remained, but most were inaccessible to loggers because of counterinsurgency operations. The relatively small number of active logging concessions were however very profitable. The primary beneficiaries of logging operations were the commercial logging companies, often headed by active or retired military men or senior civil servants, and their patrons and clients in the Royal Forest Department (RFD) and the parastatal Forest Industries Organization. A more diffuse set of status quo beneficiaries were the farmers who had cleared and settled forest lands with the encouragement of government agricultural and settlement policies. Though these policies were at odds with the policies of the RFD, Thai governments had favored the expansion of agricultural production over the protection of forests through most of the postwar era.

During the Prem governments of the 1980s the most influential advocates for forest policy reform were commercial investors who wanted to plant fast-growing trees on degraded forest land to provide raw materials for pulp and paper mills. These firms had the support of the national government, which wanted to help the export-oriented pulp and paper industries, and of RFD officials who saw commercial reforestation as an opportunity to achieve reforestation goals. Many RFD officials also used their authority to lease forest land as a new source of political patronage. During the same period, however, national political liberalization allowed advocates for environmental protection and for the rights of indigenous peoples and farmers to organize and protest the continuing dominance of commercial goals in forest policy.

The civilian government that succeeded Prem's last government was far more sensitive to public opinion. Continuing protests by environmental and equity advocates forced the government to ban commercial logging in 1989 and to put a moratorium on new commercial reforestation leases in 1990. These decisions dramatically reduced influence of status quo beneficiaries in the commercial sector and of efficiency-oriented reformers over forest policy. They also reframed the forest policy debate, which now revolved around the question of how balance the goal of forest protection with the rights of people living on government forest lands.

Civilian advocacy groups lost influence under the military junta of 1991-92. Military leaders and their allies in the parks and watershed management divisions of RFD sought to protect the country's parks and watershed forests by forcing people living in them to resettle in lowland areas. Widespread and sometimes violent protests by those being resettled slowed the implementation of this program, and it was discontinued when civilians regained power in 1992.

During 1992-95, equity-oriented reformers within the forest sector benefited from the high priority that the national ruling coalition placed on land reform, but neither they nor advocates for

forest protection had much influence on the formulation of the cabinet land reform decree. This decree transferred almost all government forest lands currently being farmed to the national land reform agency, with relatively few constraints on how farmers could use the land once it was titled. After abuses of the land reform program brought the government down in 1995, the new elected coalition government promised to find a better balance between forest protection and land reform goals. It set a new precedent for forest policy making by bringing together environmentalists and advocates for farmers' and indigenous peoples' rights to develop a new community forestry law, and succeeded in brokering an agreement between them. Unfortunately, the coalition was overwhelmed by corruption scandals and economic problems before it could pass the draft community forestry law.

Costa Rica: In Costa Rica, forest land had greater commercial value than the trees themselves. From the 1960s through the end of the 1970s, the government had encouraged forest clearing cattle for ranching and plantation agriculture, and had also allowed the landless to clear and farm forest lands. In contrast to the Philippines and Thailand, Costa Rica did not experience a logging boom, and had not developed a commercial logging elite with close ties to national government leaders. Commercial ranchers and plantation owners were the most influential status quo beneficiaries. As in Thailand, small farmers who had cleared forest lands and had some legal recognition constituted another, more diffuse set of status quo beneficiaries. Finally, at the end of the 1970s, the government created a tax credit program to encourage investment in reforestation. This program benefited large commercial firms that earned enough income to make use of tax credits.

During the economic crisis of the early 1980s, the value of forest land for commercial uses dropped. As prices for cattle and agricultural products declined in international markets, ranchers and plantation owners had less interest in clearing additional land, and fewer financial resources with which to influence land use policy. In contrast, firms that benefited from the reforestation tax credit continued to be a strong constituency for maintaining this program. As deforestation continued and domestic wood prices began to rise, some firms that had abused the tax credit by failing to ensure the survival of trees they had planted began to see the trees themselves as a valuable resource, further strengthening their interest in the tax credit program.

At the time of the Arias election in 1986, the best-organized advocates for forest sector reforms were environmentalists in domestic universities, NGOs and the national parks bureau (then part of the Ministry of Agriculture), and their allies in international environmental NGOs. Since the late 1960s Costa Rica had developed a relatively large number of national parks and protected areas, but the government had not invested in staff or maintenance. Many parks and protected areas had pockets of privately owned land within their borders, as well as unauthorized

agriculture, mining and ranching activities on ostensibly public lands. Early in his term, Arias created a new Ministry of Environment and Natural Resources and appointed a leading environmentalist to head it. With strong sectoral leadership, national and international support, environmental advocates were able to enact several reforms that restricted commercial activities and further settlement inside the national park system.

Social inequity in forest use was not as serious an issue in Costa Rica as it was in the Philippines or Thailand. Nevertheless, advocates for the rights of small farmers were able to use the Arias government's commitment to equity, and the environmental community's recognition that it needed the cooperation of small farmers to reduce deforestation, to create new reforestation incentive programs for small farmers. Advocates for economically efficient use of the country's forests had relatively little influence on policy under the Arias government. Arias sought to moderate the pace of economic liberalization, and the environmentalist coalition that dominated sectoral policy making sought to tighten regulations on commercial logging and reforestation, not loosen them.

Under the Calderon government that succeeded Arias in 1990, economic liberalization and growth were top priorities; environmental protection and social equity lost ground on the national policy agenda. As in the Philippines, environment- and equity-oriented reformers who had gained positions of power within the Ministry of Environment and Natural Resources were able to protect some reforms initiated earlier, but not to initiate new reforms. In contrast, advocates for economically efficient forest management gained influence. They succeeded in blocking the enactment of a law drafted by Arias appointees that would have increased regulations on commercial logging, and in creating tax incentives for private landowners to maintain their forests rather than clearing them for other uses.

In 1994, the newly elected government of Jose Maria Figueres made an early commitment to "sustainable development" as the guiding principle of all sectoral policies. Within the forest sector, the government sought to resolve the simmering conflict among advocates for commercial, community and conservation forestry. Using a strategy comparable to the Thai government's strategy for brokering consensus on the community forestry law, it brought advocates together to negotiate a core-buffer-production zone scheme for the national protected areas system. It also expanded the use of incentive-based policies for both environmental protection and forest harvesting, and made these incentives available to both commercial investors and small farmers. By 1996, advocates for efficiency, equity and environmental goals in the forest sector had reached agreement on a new forest law that was easily passed by the Congress.

The preceding sections sketched the context for reform in each country. The three tables on the following pages present the major reform initiatives for each country in summary form. The next three chapters present the argument for each country in more detail, and make cross-country comparisons on the factors shaping reform initiatives and their fates.

Table 1: Summary of Reform Initiation Attempts in the Philippines, 1980-96

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|---|---|--|---|---|---|--|--|
| 1980-85 Political and economic crises (F) | P1 1981-82 Raise forest taxes | Minister of Natural Resources | low: formal authority without backing from Marcos | logging industry | high though declining (most old-growth forests had been logged by late 70s) | very high: patron-client relationships with Marcos | qualified failure: industry pressured Marcos to keep increase small, gained exemptions and evaded collections |
| (F) | P2 1981-82 Expand social forestry | University researchers and NGO advocates, with international foundation support | low to high: initially no high level support within Ministry or from national government; in 1982 gained sectoral and national link to Marcos; rural livelihood program | none (program affected only deforested, settled areas) | N/A | N/A | qualified success (program used by national officials as symbolic land reform effort; used by sectoral officials as source of political patronage; few gains for nominal beneficiaries) |
| 1986-87 Political crisis and equity-oriented realignment (F) | P3 1986-88 Give small farmers incentives to reforest | DENR senior officials, international aid agencies and community development NGOs | high: formal authority, aid agency funds and NGO support; national government interest in immediate access to funds for balance of payments support and rural poverty alleviation | none (reforestation contracts offered ample political patronage opportunities to wide range of political actors from local to national level) | N/A | N/A | qualified success: program achieved short-term poverty alleviation and balance of payments goals, but poor program design and monitoring meant that environmental and economic benefits were quite limited |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|--|---|--|--|---|---|--|--|
| (F) | P4 1987 Give land titles to farmers who have cleared government forest lands | Acting Secretary of Agrarian Reform; staff of National Economic Development Authority; some NGO members of agrarian reform coalition | medium: formal authority (DAR and NEDA) and some demonstrations (NGOs); but most resources committed to advocating redistribution of private lands | Dept. of Environment and Natural Resources (would have lost up to half of all land under its control) | low: most potentially affected land was used for subsistence agriculture | high: new Secretary of DENR had close personal ties to President Aquino and strong legal argument for maintaining public ownership | qualified failure: DENR maintained control of land but committed to expand social forestry |
| 1987-90 Restoration of pre-Marcos status quo; continuing political crises (F) | P5 1987-88 Force Marcos cronies out of commercial logging | DENR senior officials | high: formal authority, Presidential support and favorable public opinion | logging industry | uneven: some high value concession forests remained, but most had been logged over by mid-1980s | low: most Marcos cronies had no remaining political patrons at national level, and were unable to coopt DENR officials | qualified success: most Marcos cronies left the industry, but some with valuable concessions were able to keep operating |
| (F) | P6 1988-89 Transfer forest use rights and protection responsibilities to communities | DENR senior officials, international aid agencies and community development NGOs | high: DENR officials' formal authority, foreign aid funds and NGO capacity to help implement at regional and local levels | logging industry | low but potentially rising: community forestry pilot program was small and limited to secondary forests, but expansion threatened commercial loggers' access to valuable forest | low: limited access to DENR regulatory process, low credibility with community forestry coalition | qualified success: pilot program was initiated, but commercial logging firms and their local/regional patrons/clients (including DENR staff) were able to keep control of the most commercially valuable forests |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|--|--|--|--|--|---|--|---|
| 1990-92 Economic crisis (F) | P7 1990-91 Raise forest charges | DENR senior officials and international aid agencies | high: DENR officials' formal authority (though logging industry challenged), conditional funds from aid agencies, support from Dept. of Finance | logging industry | high: proposed increase would substantially reduce loggers' share of resource rents | medium: limited access and influence on DENR regulations, but substantial influence in Congress and some legal grounds to challenge DENR right to raise fees | qualified success: DENR's regulatory fee enacted as legislation, but legislation redefined fee in a way that reduced government's share of resource rents |
| (N) | P8 1991 Ban logging in old growth forests | DENR senior officials, international aid agencies and environmental NGOs | high: DENR officials' formal authority, enforcement funds from aid agencies, favorable public opinion | logging industry | high: proposed ban would affect old growth forests within existing logging concessions, substantially reducing their commercial value | medium/low: limited access and influence on DENR regulations, ability to influence Congress limited by public concern about forest protection | success: ban enacted as DENR regulation and later in legislation (though considerable enforcement problems remain) |
| (N) | P9 1991-92 Ban all commercial logging | Several senators, NGO coalition, some media columnists | medium: moderate support for ban in Senate, but opposition in House; NGO coalition was not well-organized; public opinion was divided; DENR senior officials did not support | logging industry | very high: ban would eliminate industry | medium/high: substantial influence over House Natural Resources committee, though limited influence in Senate; lobbying resources used in ad campaign emphasizing job loss | failure: ban passed Senate but not House |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|--|---|--|---|---|--|--|---|
| (N) | P10 1991-92 Create national protected areas system | Senior DENR officials, international aid agencies, domestic and international environmental NGOs | medium/high: DENR needed Congress to approve legislation, but had strong support from "green" Senators and foreign aid funds | indigenous peoples (primarily concerned that they would lose right to live in and harvest products from forests in protected areas) | high: threat to livelihood and way of life | medium: support from regional and national NGOs and DENR staff concerned with indigenous rights, but no strong national organization or Congressional allies | qualified success: DENR agreed to modify legislation to prohibit forced resettlement of indigenous peoples and give them representation in management of protected areas |
| 1992-94 Political realignment favoring economic growth and efficiency (N) | P11 1993-94 pass new Forestry Code | Senior DENR officials and international aid agencies | medium: new DENR leadership had less credibility with Congress; environmental and community development NGOs divided over Code provisions allowing commercial logging to continue | Several senators and loose coalition of environmental and community development NGOs (n.b. not SQBs in standard sense) | mixed: status quo also allowed commercial logging to continue, but advocates for ban on commercial logging hoped their bill would pass in Congress | medium: strong influence in Senate, and public opinion divided on whether to continue to allow commercial logging, but low influence in House | failure: Code not passed |
| (F) | P12 1993-94 Create competitive bidding and reforestation bond system for logging concessions | Some DENR officials, international aid agencies and environmental NGOs | high: DENR officials' formal authority and aid agency technical assistance | logging industry | medium/high: proposed regulations would have significantly reduced private rent capture if bidding process was competitive and transparent | medium: informal influence on senior DENR officials through patron-client networks | qualified success: logging industry pressured DENR to water down competitive bidding procedure, but pressure from NGOs and aid agencies forced DENR to tighten requirements |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|--|--|---|--|---|--|--|---|
| 1994 Political realignment favoring integration of equity and efficiency goals (F) | P13 1993-94 Recognize indigenous peoples' claims on public forest lands | Mid-level DENR officials; indigenous peoples' groups and NGOs advocating for them; some international aid agencies; Office of the President (in 1994) | medium to high: DENR officials had limited legal authority to recognize claims (constitutional law issues); Congressional and public opinion divided; Presidential support in 1994 dramatically enhanced resources | Several senators and representatives who expressed concern over precedent for private land title system on behalf of large private landowners | medium: limited authority to influence DENR regulations, but substantial influence over Congressional legislation needed to give permanent recognition to claims | mixed: most forest areas claimed by indigenous peoples were logged -over public lands, but precedent could affect private land | qualified success: DENR issued regulations to recognize claims in 1993, but very little action to implement until President declared support for indigenous peoples' claims in 1994; Congress did not ratify claims through legislation |

Table 2: Summary of Reform Initiation Attempts in Thailand, 1980-96

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|---|--|---|--|--|--|---|---|
| 1980-88 Political realignment strongly favoring economic liberalization and moderately favoring political liberalization (F) | T1 1984-85 National Forest Policy favoring reforestation by non-government actors (especially private business) | Deputy Prime Minister; senior civil servants in Agriculture and other ministries; senior Royal Forest Dept. officials; forestry academics and consultants | high: Deputy PM had support from PM and authority to bring Policy to Cabinet for enactment as Cabinet resolution | small farmers on public forest lands potentially displaced by commercial tree plantations | high: land was sole source of livelihood for many small farmers | low: limited formal organization; weak alliances with environmental and community development NGOs (NGOs were not well-organized, had very little access to policy making fora) | qualified success: Policy enacted and RFD authorized to lease large areas of degraded forest land to commercial firms for plantations; but Policy was so vague that it allowed conflicting interpretations of its core provisions |
| (N) | T2 1985-88 Restrictions on commercial reforestation | small farmer groups; local and regional community development NGOs; regional and national environmental NGOs; some academics | low/medium: initially limited to local protests (sometimes violent); over time increasing ability to attract favorable coverage by Bangkok media | Reforestation investors (including some MPs); senior officials in RFD; academic experts and consultants associated with National Forest Policy | high: long-term leases available at nominal cost for commercial tree plantations, and profitability rising | high: RFD officials formally controlled land allocation; MPs had access to and influence on Cabinet officials in charge of forest policy | qualified failure: advocates halted individual projects, but did not succeed in changing regulations or policy |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|--|---|--|---|--|---|--|--|
| 1988-91 Political realignment reducing military influence in government, favoring civilian patron-client networks (F) | T3 1988-89 Total logging ban | national environmental NGOs in coalition with regional and local environmental and community development NGOs and farmer groups | medium/high: coalition had developed strong local organization to protest logging abuses, and tried to influence MPs in 1988 election campaign, but only gained national attention by blaming lethal flash flood of fall 1988 on logging | logging industry; RFD | medium/high: industry been in decline since late 1970s and had begun moving into neighboring countries, but remaining Thai concessions were valuable; regulation of logging was RFD's primary mandate, and also provided RFD officials with lucrative patronage opportunities | medium: some MPs and Cabinet members had logging concessions, but most did not, and media was portraying opponents of logging ban as self-interested and corrupt; RFD officials had very limited influence on Cabinet decisions | success: Cabinet resolution placed indefinite moratorium on logging in Jan. 1988, and Parliament passed law in May 1988 |
| 1991-92 Military coup and realignment favoring economic liberalization and environmental protection (F) | T4 1991-92 Reclassification of forest land from commercial to conservation use | RFD senior officials | high: formal authority to reclassify forests after logging ban; support from military- appointed PM for environmental protection | farmers and tribal groups living in and around reclassified areas | high: land was sole source of livelihood for most farmers and forests were central to livelihood and culture of tribal groups; reclassification was likely to be followed by resettlement | low: organized opposition limited by uncertainty about whether land was being reclassified and whether reclassification would lead to resettlement, and by fear of military repression | success: RFD classified virtually all remaining forest in Thailand for conservation use and planned designation as national park or wildlife sanctuary |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|---|---|--|---|--|--|---|--|
| (F) | T5 1991 Resettlement of farmers outside upper watersheds and national parks | Military officers and allies in watershed and parks divisions of RFD; some support from Bangkok-based environmental groups | high: military government and RFD had formal authority to enact policy; military could use force to ensure resettlement | farmers living in upper watersheds and parks; farmers living in resettlement areas | high: land was sole source of livelihood for most farmers; all resettlement areas were already inhabited, so resettlement required land redistribution | low/medium: initially only scattered protests, but increasing organization and support from local/regional NGOs, Buddhist clergy and national media | qualified success: military did force resettlement of several thousand farmers in Northeast region, but implementation stopped when military government fell in 1992 and some farmers returned |
| 1993-95 Political realignment favoring equity for the rural poor (F) | T6 1993 Transfer of all occupied and farmed forest land from RFD to land reform agency for titling | Prime Minister, Agriculture Minister and Cabinet; majority of MPs; provincial land investors/speculators (including many MPs); small farmers | very high: Prime Minister and Cabinet had formal authority and public support for land reform | RFD; some environmental NGOs | high: RFD would lose control of nearly half of public forest land; environmental NGOs feared land speculation would accelerate deforestation | low: RFD and environmental NGOs had very limited access to or influence on Cabinet officials (Minister of Agriculture strongly favored land reform); and virtually no public support for restricting scope or pace of reform to protect forests | success: reform enacted by Cabinet decree and RFD forced to transfer large area of forest land, including many areas it had reclassified for conservation in 1991 |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|--|--|--|---|---------------------------------|--|---|---|
| 1995-96 Political realignment favoring provincial politicians and their patron-client networks (N) | T7 1995-96 Passage of community forest law | Prime Minister and some cabinet officials; some senior RFD officials; community development NGOs and some environmental NGOs | medium: Prime Minister had promised to break 4-year deadlock on draft law, but cabinet had higher priorities and was caught up in corruption scandals; RFD and NGOs disagreed strongly on provisions of law | some environmental NGOs | high: some environmental NGOs believed that community forestry law would lead to destruction of national parks and protected areas system through encroachment | medium: some access to and influence on RFD's drafting team, but little access to or influence on Cabinet | qualified failure: government did broker agreement among RFD, community NGOs and some environmental NGOs, but fell before it could pass revised community forestry bill |

Table 3: Summary of Reform Initiation Attempts in Costa Rica, 1986-96

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|--|---|---|---|---|--|---|--|
| 1986-90 Political realignment favoring environmental protection and social equity (F) | CR1 1986 create Ministry of Environment and Natural Resources (MINEREM) | President Arias, domestic and international environmental NGOs | high: top presidential priority in "honeymoon" phase with Legislative Assembly; NGOs had influence on public opinion | PUSC deputies and other conservatives in Legislative Assembly; large ranching, mining and logging firms | medium/high: commercial firms feared that "green" leadership at MINEREM would restrict commercial activities; conservative deputies opposed greater regulation of private commerce | medium: PUSC deputies could block legislation to create MINEREM, but could not prevent President from using executive powers to "reorganize" existing ministry | qualified success: Arias created MINEREM by Presidential decree and named Alvaro Umana, noted environmentalist, as acting Minister |
| (F) | CR2 1986 pass new national forest law making unauthorized deforestation a criminal offense, increasing logging fees and dedicating them to reforestation/forest protection fund | President Arias, MINEREM, domestic and international environmental NGOs | high: top Presidential priority in "honeymoon" phase with Legislative Assembly; environmental NGOs had influence on media and public opinion; deforestation nationally recognized as pressing problem | commercial logging firms, landless migrants, ranching and plantation firms; land speculators | mixed: large commercial logging, ranching and plantation firms could get legal permits to cut forest, but small informal firms and migrants could not, and would be subject to prosecution; logging fees were not raised enough to jeopardize logging firms' profits | medium/low: large firms had some organized influence in Assembly through trade associations, but less influence with MINEREM; small firms and migrants had no formal organization or access | qualified success: new national forest law made deforestation a crime, but legal challenges and judges' reluctance to enforce limited implementation; logging fee collections rose and helped fund reforestation, but evasion was widespread |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|---|--|--|---|--|---|---|--|
| (F) | CR3 1987 ban sawnwood exports and encourage co-location of logging and wood processing operations by taxing inter-regional log transport | President Arias, MINEREM, domestic and international NGOs | high (as above), and President imposed ban by decree | commercial logging and lumber firms | medium/high: most commercial logging firms exported only a small fraction of logs, but some sawnwood firms were making significant profits from exports; transport tax could significantly reduce profits | low: logging and lumber firms were not well-organized or well-represented in Arias administration | qualified failure: sawnwood export ban and transport tax were enacted and enforced, but tax was challenged in court and eventually invalidated; wood processing industry did not increase investment or productivity in response to ban or tax |
| (F) | CR4 1988-89 create national protected areas system (SINAP) | MINEREM, domestic and international NGOs, some agencies and commercial banks (via debt-for-nature swaps) | medium: MINEREM had legal authority to reorganize national parks system, but limited funds or staff to implement core/buffer zone strategy | unauthorized residents and land users inside parks | mixed: for small farmers living inside parks, land was sole source of livelihood, but SINAP proposals did not envision forced resettlement; commercial users could lose access to valuable lands | low/medium: SQBs were not well organized to influence MINEREM policy making, but could influence or evade implementation at local level | qualified success: significant improvement in forest protection inside top priority parks, but funding and staff constraints limited national application of policy; unauthorized occupancy and land use continued in many areas |
| (F) | CR5 1988-89 create smallholder reforestation program | MINEREM, Dutch aid agency, <i>campesino</i> organizations; domestic and international environmental NGOs | high: MINEREM had formal authority to initiate program, Dutch aid agency committed substantial funding, NGOs supported program development and implementation | N/A: Dutch funds were additional to existing reforestation tax credits, which benefited primarily large commercial firms | N/A | N/A | success: revolving loan program for small farmer organizations was initiated and generated substantial demand |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|---|---|--|---|--|--|---|--|
| (F) | CR6 1989-90 crack down on corporate abuses of reforestation tax credits | MINEREM, Legislative Assembly committee | high: both MINEREM and LA had formal authority to investigate abuses; LA had authority to change tax credit law | large commercial firms (in industry and commerce; few were actively involved in forest sector) | high: tax credit was worth substantially more than cost of replanting | high: influence on LA deputies and Arias administration | qualified failure: some individual firms were prosecuted for abuses, but tax credit remained and monitoring of reforestation claims did not increase |
| 1990-94 Political realignment favoring economic efficiency (NF) | CR7 1990-92 pass new forest law favoring environmental and equity goals | mid-level MINEREM officials, domestic and international environmental NGOs, Dutch aid agency | medium: MINEREM officials controlled drafting process, and environmental NGOs lobbied LA, but <i>campesino</i> organizations did not actively support, and senior MINEREM officials and president tacitly opposed | commercial logging, lumber and reforestation firms | medium/high: draft law would have given new legislative sanction to taxes and restrictions on logging and wood processing that courts had overturned | medium/high: during 1990-91, USAID helped wood industries organize and lobby to block passage of draft in LA; senior MINEREM officials and other administration officials tacitly supported wood industries | failure: draft law did not pass Legislative Assembly |
| (F) | CR8 1990-91 create incentives for private landowners to practice sustainable yield forestry instead of clearing forest land | senior MINEREM officials, some domestic environmental NGOs and international aid agencies | high: MINEREM officials had formal authority to develop incentive program and resources from treasury and aid agencies | N/A: funds were additional to existing programs | N/A | N/A | success: program was created and did generate 5-year commitments by private owners to maintain forests, in exchange for 5-year bonds |

| National Circumstances; (F)avorable or (N)ot favorable to proposed reform | Proposed Reform | Reform Advocates | Advocates' Political Resources | Status Quo Beneficiaries (SQBs) | Commercial Value of Affected Forest Resources to SQBs | SQBs' Political Resources | Reform Outcome |
|---|--|--|---|--|--|---|---|
| 1994-98 Moderate political realignment favoring integration of environmental, economic and social goals and policies (F) | CR9 1994-96 pass national forest law acceptable to commercial firms, environmental advocates in government and NGOs, and <i>campesino</i> organizations | President Figures and senior MINEREM officials | high: President made passage of revised law a top priority; MINEREM Minister Castro was well-respected by most advocates and worked to broker consensus | potential opponents included commercial firms, environmental advocates in government and NGOs, and <i>campesino</i> organizations; all were willing to fight any draft that did not improve on the status quo from their point of view | high: all advocates recognized that law would set guidelines for relative priority of commercial, conservation and community use | mixed: all advocates had access to policy process during 1994-95, but none could dominate given government commitment to broker consensus | qualified success: Legislative Assembly passed new law in 1996; law uses economic incentives as primary instrument for achieving policy goals; sustainability will depend on continued funding from domestic treasury and international aid agencies/private firms (under FCCC AII programs) |

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Chapter 4

Initiating Forest Policy Reform: The Philippines, 1980-96

I. Introduction and summary of the argument

During the past fifty years, the Philippines has lost more than half of its forest cover, despite policies aimed at maintaining the country's forests for timber production, soil and water protection, wilderness preservation and recreation. The political economy of forest management heavily favored commercial logging firms and their patrons and clients in government. The major losers have been indigenous groups and migrants denied the right to live in forested areas or harvest forest products; farmers and communities downstream from deforested watersheds and increasingly vulnerable to flooding and drought; and future generations who have lost potential streams of tax revenue, environmental services and aesthetic values from the Philippines' forests.

The concentration of the benefits from forest policy reached its peak during the 1970s under the Marcos martial law regime, when fewer than two hundred logging concessionaires controlled virtually all of the Philippines' forests and roughly one-third of its land area. In the early 1980s, as the Marcos regime entered a period of economic and political crisis, it came under increasing domestic and international pressure to initiate efficiency- and equity-oriented reforms. Bowing to these pressures, the Marcos regime undertook a stabilization and austerity program to deal with its balance of payments crisis, and also initiated a national social reform program. These national reform initiatives were supposed to be supported by reforms in each sector of the economy. Within the forest sector, however, reform advocates were not well-organized, logging concessionaires continued to benefit greatly from the status quo, and they maintained substantial influence over President Marcos and senior forestry officials. Though domestic and international actors proposed a number of efficiency- and equity-oriented forest sector reforms, few were initiated, and those were either derailed or coopted by status quo beneficiaries during implementation.

When Corazon Aquino's government came into power in 1986, it inherited the economic and political crises created by the Marcos regime. It attempted to continue the stabilization and

austerity program initiated by Marcos, but it also made a political commitment to increase social equity by improving conditions for the rural poor. The Aquino government began to eliminate public and private monopolies that had benefited Marcos cronies, and to make major investments in rural services and economic development programs to address rural poverty and undercut the Communist insurgency. The equity-oriented reforms were, however, tightly constrained by the need to maintain the support of the country's economic, political and military elites in order to fend off coup attempts from the left and right.

The Aquino administration's reform proposals for the forest sector reflected these national political circumstances. It proposed to "give the forests back to the people" by canceling logging concessions and initiating "people-oriented forestry" programs that gave forest tenure and use rights and reforestation contracts to rural residents. Because most logging concessions belonged to Marcos cronies, the administration could cancel them without arousing opposition from the broader economic and political elite. Moreover, because forests were public lands, they offered the administration a way to make progress on land reform when private landowners blocked redistribution of private lands. Finally, by initiating reforestation and forest management programs that involved rural smallholders, the administration found a way to channel foreign aid funds into the sector to meet both its own equity goals and the environmental goals that were becoming important for the international aid agencies.

Though the timing and content of the Aquino administration's reform proposals reflected the national political realignment, sectoral politics helps explain the outcomes of the reform process. At the sectoral level, status quo beneficiaries in the commercial logging industry--both Marcos cronies and regional politicians and businessmen--fought to maintain their dominance in the sector. A cadre of reform advocates led by Fulgencio Factoran, Secretary of the Department of Environment and Natural Resources (DENR), opposed them. These governmental reformers formed alliances with domestic equity- and environment-oriented NGOs, and with environment- and efficiency-oriented international aid agencies. Over the six years of the Aquino administration (1986-92), the economic and political resources of the commercial logging industry declined, and the constituency for equity-oriented forest policies and programs grew and organized.

Despite some conflicts between governmental and NGO members of the reform coalition, the reformers eventually succeeded in crippling the commercial logging industry and beginning a

serious effort to promote community-based forest management. On the other hand, the logging industry retained enough influence in Congress to block legislation that would have cemented reforms initially passed as DENR regulations. At the local level, both the continuing influence of patron-client networks and limits on the administrative capacity of DENR field staff, community development NGOs and local peoples' organizations raised questions about the feasibility of community-based forest management.

Finally, the reform coalition did far less to initiate environment- and efficiency-oriented reforms than equity-oriented reforms. Within the coalition, the constituency for environmental reforms was relatively small and weak. Domestic and international environmental advocates concentrated on integrating forest conservation goals into equity-oriented programs. International aid agencies formed the primary constituency for efficiency-oriented reforms, but like environmental advocates, they accepted the Aquino administration's prioritization of equity goals, and looked for ways to promote efficient management, harvesting and marketing of forest products by community organizations. Some aid agencies, particularly the Asian Development Bank and USAID, also pushed for reforms to increase efficiency and profitability in the commercial logging and wood products industries, but they were unable to gain the administration's support for measures that might be seen as benefiting the commercial logging industry at the expense of the rural poor.

In 1992, the election of Fidel Ramos to succeed Corazon Aquino signaled a national political realignment in favor of economic efficiency goals. Ramos announced an ambitious economic development plan, Philippines 2000, that was designed to boost GDP and exports through domestic economic liberalization and encouragement of foreign direct investment. The forest sector was not a major focus of Philippines 2000, because its current and potential contribution to the country's economic development goals were small. Ramos appointed a respected environmentalist, Angel Alcala, to head the DENR, but Secretary Alcala proved to be a lackluster advocate for continued forest sector reforms and a disastrously poor manager of the agency's operations. The one significant reform initiated by DENR under Alcala, an attempt to promote sustainable commercial forestry by revising concession rules, turned into a fiasco as commercial logging firms used their influence to reduce logging fees and reforestation requirements. Other senior officials in the DENR became caught up in internal turf battles, and

the momentum for forest sector reforms within DENR evaporated. Outside DENR, domestic NGOs and international aid agencies concentrated on consolidating reforms initiated by the Factoran team.

Sectoral advocates' capacity to initiate reforms declined during the Ramos term. Instead, the locus of reform initiation shifted back to the national level. During the first two years of Ramos' term, the administration's focus on economic growth and efficiency spurred a backlash by equity advocates who claimed that much more needed to be done to ensure that the most disadvantaged groups in Philippine society benefited from economic growth. Responding to these concerns, the administration announced a "Social Reform Agenda" (SRA) in the fall of 1994. The SRA identified indigenous peoples as a priority social group, and the Office of the President prompted DENR to initiate a new set of equity-oriented forest sector reforms by providing tenure rights to indigenous peoples. Though DENR had begun to address indigenous peoples' claims to public forest land under Factoran, the scope and pace of land claims resolution accelerated dramatically as a result of the SRA.

Angel Alcala was forced to resign in mid-1995 after a logging scandal involving several of his advisors and family members. His replacement at DENR, Victor Ramos, was a member of the Factoran team who returned to DENR with a focus on consolidating reforms and improving DENR's internal management. Under Ramos' tenure, no major new forest policy reforms have been initiated, but the DENR has done more to ensure that existing initiatives are effectively implemented.

The following sections review the historical development of forest policy in the Philippines (section II) and the record of reform initiatives under Marcos, Aquino and Ramos (section III). The conclusion (section IV) summarizes the evidence on how national political circumstances have interacted with the political strategies and resources of status quo beneficiaries and reformers to affect the timing, content and success of Philippine reform proposals since the early 1980s.

II. Historical background

A. Forest policies and forest industries under Spanish and American colonial rule: from neglect to exploitation

When the Spanish established their first forts at Cebu and Manila Bay in the mid-16th century, the islands of the Philippine archipelago were densely forested and thinly populated. The inhabitants were a mix of long-settled animist peoples and more recent Islamic settlers from the Malay peninsula, along with Chinese traders who were concentrated in coastal towns (Steinberg 1994: 37-47). Under Spanish colonial rule for the next three hundred and fifty years, the islands' population slowly increased. State-chartered Spanish plantation owners and monastic orders cleared land in the major river valleys for tobacco, sugar and hemp plantations. Small farmers cleared land for rice and corn fields. A local logging industry grew up to supply ship timbers. The scale of this agricultural and logging activity remained small relative to the islands' forest resources. In 1900 seventy percent of the archipelago's land area was still forested (Bautista 1990: 68).

The pace of deforestation increased significantly after the United States took control of the Philippines at the turn of the century. Following Spanish colonial law, the United States declared that all land not legally titled was "public land"; its allocation and use were to be decided by the U.S.-controlled Philippine Commission (Putzel 1992: 52). Using this doctrine, the U.S. laid claim to more than ninety percent of the land in the Philippines, most of it forested. From the beginning of the American occupation to the Second World War, government policies encouraged the sale and use of public land for large-scale plantation agriculture and small-scale farming (Lynch and Talbott 1995: 44-45).

The logging industry also grew to supply both domestic and international timber markets. Until the Second World War, the industry was primarily controlled by large US forest product companies, including Georgia Pacific, Weyerhaeuser and others. These companies were regulated by the Bureau of Forestry, an agency established by the U.S. in 1904 and modeled on the U.S. Forest Service. Its mandate was to delineate and patrol forest reserve areas, and to regulate commercial logging to balance productive use and conservation of the Philippines' forest resources. From its inception until Philippine independence in 1946, the Bureau encouraged the

development of the logging industry; its commitment to conservation was weak at best (Boado 1988: 172-73).

B. The Philippine government's forest policies, 1946-1980

1. The selective logging system and its selective enforcement

After gaining full independence in 1946, the Philippine government continued to promote commercial logging, wood processing and wood products industries. Under President Magsaysay, the Bureau of Forestry also attempted to increase the emphasis on conservation by introducing a selective logging system (SLS) (Boado 1988: 173). Concessionaires were to harvest only mature trees, using logging methods that resulted in minimal damage to the surrounding stands. Concessionaires were also responsible for replanting seedlings of valuable species, and for policing their concession areas to prevent logging by illegal loggers or would-be settlers. Forest officers and guards were to monitor the actions of concessionaires to ensure that they were meeting the terms of their contracts (Galicía 1995: 9-12).

Adhering to the selective logging system would only have been rational for concessionaires under two conditions. First, they would have to have secure and exclusive rights to a second harvest after 20-40 years (the time required for tropical hardwoods to regenerate). Second, the return on their investment in forest management during that period would have to be competitive with alternative uses of their capital. From the 1950s through the early 1970s, however, forest concessions were issued for periods 10 years or less, and the Philippines experienced relatively rapid economic growth. Concessionaires could earn more by liquidating their forest holdings using the lowest-cost methods of extracting trees than by managing them for a second cut.

Preferring to meet their economic interests than their legal obligations, concessionaires routinely bribed the Bureau of Forestry's inspectors to look the other way while they logged destructively (Boado 1988: 174-75).¹ Moreover, as the financial rewards from logging

¹ Even after 1974, when the term of concessions was extended to twenty-five years with an option to renew for another twenty-five, and economic growth began to slow, investment in careful harvesting and reforestation was not economically rational for concessionaires (Cruz 1985: 7). Under the martial law regime imposed by Ferdinand Marcos in 1972, no concessions granted by the state were secure. Most concessionaires discounted the *de jure* possibility of holding on to their concessions for a second cut. To get as much as they could from their

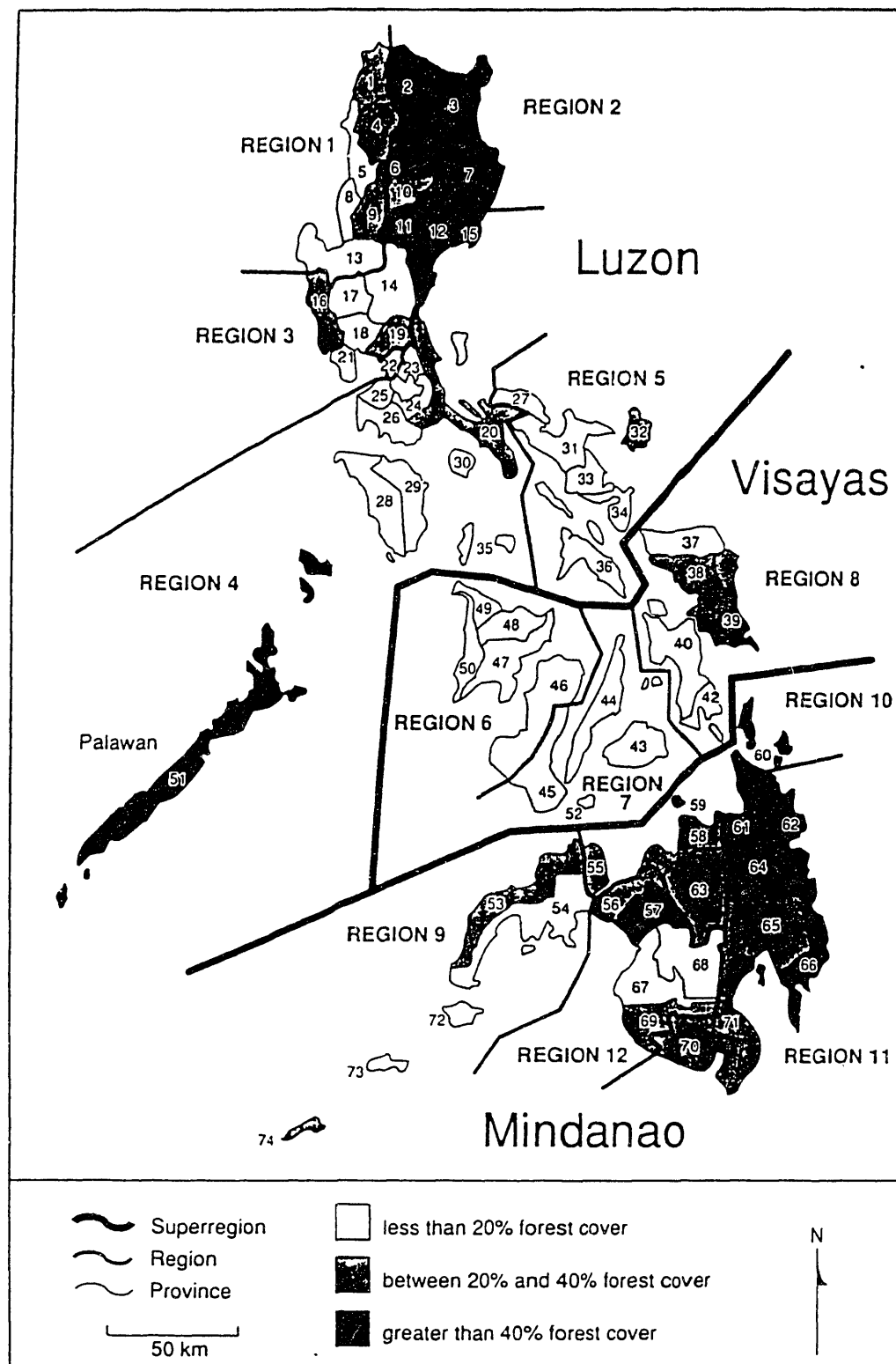
concessions grew, concession rights became an important source of political patronage. By the mid-1950s, Filipino Presidents, Senators and Congressmen competed to gain access to logging concessions for themselves, their families and their political patrons and clients (Porter with Ganapin 1988: 26-27). Positions at the Bureau of Forestry became patronage plums, and forest officers at all levels supplemented their salaries by selectively enforcing logging regulations (Ross 1996a: 10-12).

Though the environmental costs of rapid forest exploitation were high, so were the short-term financial benefits. Thanks to the government's promotion of the logging and wood products industries, the mechanization of logging, the expansion of the road network, and the rapid growth of international demand for construction hardwood, the Philippines became the world's leading tropical hardwood timber exporter by the mid-1960s. The export share of wood products peaked in 1967 at roughly 30% of all foreign exchange earnings, and its contribution to the economy peaked in 1970 at 12.5% of GDP (ADB 1994: 7). The area under logging concessions peaked at 10.6 million hectares in 1977, roughly one third of the total land area of the Philippines and nearly 90% of all land classified as forest (Boado 1988: 174). By 1980, most of the country's forests were depleted of commercially valuable timber; the remaining well-stocked areas were concentrated in northern Mindanao, Northern Luzon and Palawan (see Figure 1).

2. Deforestation by the landless as an alternative to land reform

Commercial logging firms, and their political patrons and clients, were clearly the main beneficiaries of Philippine government forest policy through the 1970s. Indigenous peoples and long-settled migrants who lived in or adjacent to forested bore many of the direct costs. Though most had never had any state-recognized rights to occupy or harvest the forest, many indigenous groups had developed sophisticated common property resource management systems that maintained local stocks and flows of forest goods and services. Migrants from the lowlands typically had not developed the same sophistication in forest management, but they recognized that forests were important to their water supply and in any case had little opportunity to cut timber for commercial sale. Both indigenous people and migrants lost control over forests when

concessions before Marcos took them away, concessionaires continued to violate the SLS rules (Ross 1996a: 15-19).



Forest cover of the Philippines in 1980, showing provinces and regions

Figure 1. Source: Kummer (1992: 40).

commercial concessionaires moved in. Whether forcibly evicted or not, they were often forced to relocate by logging operations that disrupted their agricultural and hunting practices (Walpole et al. 1994).

As it dislocated long-settled communities, commercial logging provided some indirect benefits to new migrants who entered logged-over forests on logging roads, cleared the remaining trees and planted food crops on the land. During the early postwar years, the government allowed some conversion of forest lands to agriculture under U.S. colonial era homesteading laws, but as the value of forests for logging grew in the 1960s, the government began to discourage forest clearing except as part of government-controlled settlement programs (Bautista 1990: 74-75).

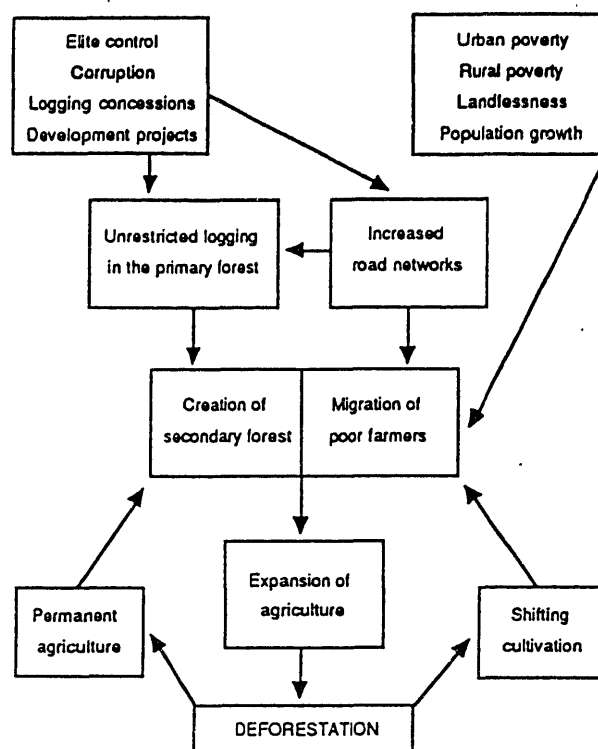
In any case, government settlement programs and policies were not the primary causes of upland migration.² The underlying causes of rural migration included rapid population growth, the failure of land reform policies to reduce great inequality in the distribution of fertile agricultural land, and the failure of the Philippines' import-substitution industrialization strategy to produce enough growth in non-farm employment to absorb the growing rural landless population (Cruz et al. 1992: 25-29). Though the government outlawed the practice of clearing forests for agriculture except in designated settlement areas, it made no serious attempt to evict unauthorized settlers except when they clashed with ongoing logging operations. Instead, successive governments adopted a *de facto* policy of using the logged over forests as an expedient alternative to redistributing private agricultural land (Boado 1988: 196-97; Kummer 1992: 147).

Both the logging industry and the population in "upland" areas grew dramatically in the years from 1950 to 1970.³ The two trends were linked by logging roads, which allowed migrants from lowland areas to move into logged-over areas and clear the remaining trees (see Figure 2 and Kummer 1992: 97-98). Over this 20 year period, the upland population increased from 5.9

² Cruz et al. (1992: 28) point out that resettlement programs in the 1960s and 1970s directly involved 200,000 families, but an additional 1.3 million families moved into upland areas along government roads built for settlement programs.

³ The term "upland" refers to the hilly areas of the Philippines, which cover roughly half of the archipelago's land area. As the country's lowland forests disappeared in the first half of the 20th century, the terms "upland" and "forest areas" became synonymous. This equation of uplands and forests persisted until the 1970s, when it became obvious that the growing upland population had cleared substantial areas of forested land for agriculture and settlement. By the 1980s, the term upland tended to connote occupied or settled hilly areas in the public domain, with forest cover as a secondary meaning. See the discussions in Fernandez (1983: 18-19) and Ellevera-Lamberte and Sevilla (1983).

to 11.1 million people, an average annual growth rate of 3 percent (vs. 2.8 percent for the total population; see World Bank 1989: 152).⁴ Most of the migrants were landless farmers from the densely populated lowlands of central Luzon and the Visayan islands; their primary destinations were the upland areas of Luzon and Mindanao and the metro Manila region.



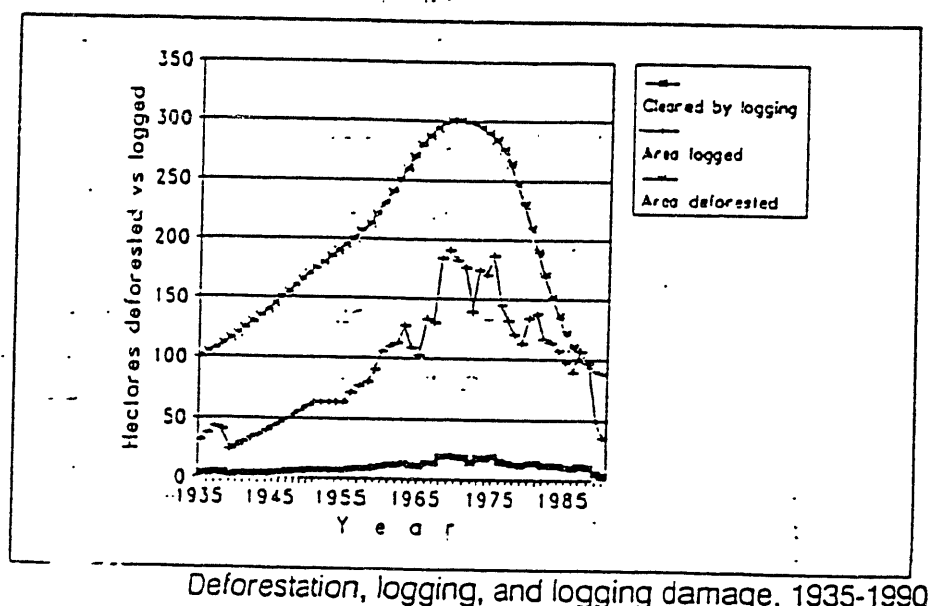
Overview of deforestation in the Philippines

Figure 2. Source: Kummer (1992: 96).

Following the rural roads built by the government and the logging roads carved by concessionaires, migrants penetrated logged-over forests, cleared the remaining trees, and burned the ground cover to fertilize the soil. Unfortunately, the poor soil, steep slopes and higher elevations of most hilly areas proved unsuitable for continuous cultivation of the main lowland annual crops (rice, maize and cassava). Without legal title, migrants were unable to use their land as collateral for credit, and therefore unable to make investments in maintaining the land's fertility

⁴ These upland population figures are based on careful empirical case studies and extrapolations from census data by Cruz and Zosa-Fernandil (1988); the trend may be more accurate than the point estimates, but in any case it is clear that by the 1970s upland settlers accounted for at least 10% and possibly up to a quarter of the total Philippine population.

(e.g. use of fertilizer, construction of terraces to slow erosion, purchase of additional land so that some land could remain fallow each season, etc.) Once they exhausted the fertility of cleared areas, migrants repeated the land clearing process in adjacent forested areas, where soil, slope and elevation were often less favorable. Together, logging and upland migration fostered a spiral of deforestation which has proven impossible to reverse in most areas of the Philippines (see Figure 3).



Deforestation, logging, and logging damage, 1935-1990

Figure 3. Source: DENR (1990a: 16).

3. The forest sector under Marcos: the centralization of patronage

When Ferdinand Marcos became president of the Philippines in 1965, the country's commercial forestry sector was near the peak of its profitability. Marcos did little to change the dynamic identified above. He continued to support the commercial logging industry's expansion by issuing more concessions. He did little to improve the lot of the landless, either through land reform in the lowlands or targeted land titling, extension and credit programs for upland dwellers. Instead, Marcos concentrated his energy on centralizing control over the allocation of logging concessions within the Office of the President.

Marcos served nearly two full terms as President (1965-69 and 1969-72) before declaring martial law. His most important "reform" in the forestry sector during this period was to make the Director of the Bureau of Forestry directly accountable to the President, rather than to the Secretary of Agriculture and Natural Resources. Over the vociferous objections of many members of Congress (who probably feared the loss of influence over the Bureau of Forestry far more than the risk to the Philippines' forests), Marcos appointed a loyal but otherwise unqualified sycophant as Director of the Bureau. He used the Bureau's discretionary authority to cancel the concessions of political rivals and their clients, and to reallocate them to members of his own growing client network. Marcos' use of the Bureau's authority was especially notable in the run-up to the election of 1969. Among other curious decisions, the Bureau issued nearly a thousand short-term licenses covering nearly three-quarters of a million hectares of land during the month before the election (Ross 1996a: 14-18).

During the first years of martial law, Marcos continued to use the forests as a source of political patronage, but he also made some changes that appeared to be legitimate reforms. In forestry as in other sectors, Marcos seems to have had a sincere desire to use his martial law powers to clean up the worst excesses of the patronage-riddled political system that he had helped create. Unfortunately, he had an equally sincere desire to loot the country's wealthy families and its shaky economy by seizing private property and creating public monopolies (cf. Wurfel 1988: 135-140; Hutchcroft 1991).

The most important of Marcos' reforms in this period was the Forestry Reform Code of 1975 (ROP 1975). Issued as a Presidential Decree, the Forestry Code had several elements designed to promote efficiency, environmental protection and social equity in the forest sector.

To rationalize forest use, the Code required the Bureau of Lands to survey and classify public forests into reserves for timber production, parks and sanctuaries, and critical watersheds. To give private concessionaires incentives for sustainable forest management, the Code fixed the maximum term of forest concessions, (now called Timber License Agreements) at 25 years, renewable for a second 25 years with the approval of the Bureau of Forestry (now renamed the Bureau of Forest Development (BFD)). It also sought to promote the development of the domestic wood products industry by giving incentives for establishment of tree plantations and providing subsidized credit and duty exemptions for investments in wood processing and

production.⁵ At the same time, the Code established the President's authority to "amend, modify, replace or rescind any contract, concession, permit, license, or any other form of privilege granted herein," when "national interest so requires" (ROP 1975: Sec. 20). What Marcos gave to the wood industries, he could also take away.

To protect watersheds and soils, the Code required that all lands whose slope was 18 percent or higher (roughly half of the Philippines' land area) remain permanently in the public domain, and be reforested if necessary to prevent erosion. The Code also prohibited logging in critical watersheds, parks and wildlife sanctuaries, and authorized the government to cancel concessions and expropriate private land where necessary to protect forest cover.

Recognizing that the state had not been able to enforce its ban on forest clearing by *kaingineros* (in Tagalog, the practice of forest clearing for agriculture is called *kaingin*; those who practice it are *kaingineros*), the Code allowed farmers who had settled on public forest lands prior to the Code's enactment to remain, if they agreed to replant trees on their holdings and not to clear any additional forest. On the other hand, the Code stiffened fines and imprisonment penalties for *kaingineros* who could not prove occupancy prior to the promulgation of the Code.

The Code was the most systematic attempt by the Philippine government to establish a framework for multiple use and protection of the country's forests. It has remained the legal basis of forest regulation by the Bureau of Forest Development (since 1987 the Forest Management Bureau) and other government agencies. Though it made some important changes from past practices, the Code also enshrined President Marcos' authority to manipulate the commercial licensing process at will, and it gave jurisdiction over half the Philippines to a regulatory agency which was well-known for corruption and incompetence.⁶ Over the next decade, the Code was not effectively implemented. Instead, the combined weight of patronage politics, venal

⁵ Sawmills began to face overcapacity problems in the mid-1970s. In response, the Marcos government began closing the smallest and most inefficient sawmills, and encouraging TLA holders to become vertically integrated by buying sawmills. Logging concessionaires owned roughly 30 percent of all sawmills in 1975. Vertical integration peaked in 1981, when logging concessionaires owned roughly 60 percent of all sawmills (111 of 182), then declined back to one third (59 out of 171) by 1989 (Boado 1988: 174-75; DENR 1995a: 47). Logging concessionaires generally did not own plywood, veneer, pulp and paper plants or furniture making operations; the Paper Industry Corporation of the Philippines is the only major pulp and paper producer which leases forest land to supply its mills (ADB 1994: 8).

⁶ Soon after it was renamed in 1973, the Bureau of Forest Development (BFD) was nicknamed the "Bureau of Forest Destruction" by its detractors (PC4 1995).

administration and fiscal crisis exacerbated the forest sector's economic, social and environmental problems.

III. Philippine forest policy reforms since 1980: national crises and sectoral politics

The following sections review the record of attempts at reform since 1980 in some detail. They show how the declining commercial value of forest resources and a series of national crises created opportunities for reformers to initiate efficiency-, environmental- and equity-oriented reforms. They then examine the political resources and strategies of sectoral reformers and status quo beneficiaries involved in reform attempts, particularly their attempts to gain or maintain support from national-level actors.

This analysis shows that national circumstances heavily influenced the timing of reform proposals and the relative priority they gave to economic efficiency, social equity and environmental protection goals. At the sectoral level, differences in the political resources and strategies of advocates for each of these goals also influenced the content of reform proposals. Finally, the success of reform proposals was most heavily influenced by the costs that status quo beneficiaries expected to bear if they were enacted, the political resources that status quo beneficiaries were able to deploy to block proposals they opposed, and the extent to which sectoral reformers were able to draw national-level support to counter the influence of status quo beneficiaries at the sectoral level.

A. The last years of the Marcos regime

Facing national economic and political crises in the early 1980s, Marcos initiated both efficiency- and equity-oriented reforms at the national level. The primary goal of efficiency-oriented reforms was to increase government revenues to deal with the balance of payments crisis. To achieve this goal in the forest sector, Marcos appointed a technocrat with a good reputation as Minister of Natural Resources in 1981, with a mandate to increase the government's share of logging profits. When the Minister attempted to collect the taxes, however, the Marcos cronies who controlled most of the country's forests protested and succeeded in derailing the tax effort. It was not until

1985, as the fiscal crisis peaked, that an interagency task force chaired by the influential Minister of Trade was able to crack down on some of the worst tax evaders.

Marcos was equally concerned with the growing force of the Communist insurgency in the countryside, and he sought to counter it with an equity-oriented national livelihood program, the KKK. In the forestry sector, advocates for social forestry saw the government's concern with rural equity as an opportunity to advance their goals. Prior to the initiation of the KKK, they convinced the Minister of Natural Resources to support a pilot social forestry program. After the initiation of the KKK, however, the social forestry program was coopted by forestry officials who wanted to use it as a conduit for KKK funding.

Finally, one of Marcos' last decisions in office was to impose a moratorium on logging in a number of heavily deforested provinces. His motivations for this move may have included sincere concern about the impacts of deforestation in these provinces, and/or anticipation that he could reap additional financial gains and political support by granting selective exemptions to the ban. Whatever his motivations, the ban was not seriously enforced, so its environmental benefits were negligible.

Marcos' abortive forest sector reform attempts in the last years of his regime show both the strong influence of national political circumstances on the timing and content of sectoral reforms, and the importance of sectoral politics in defining the content of reforms and affecting their success.

1. National circumstances in the early 1980s: economic and political crisis and attempts at reform

During the last years of the Marcos regime (1980-85), Marcos and his leading domestic and international advisors recognized that the regime faced serious economic and political problems, caused by the sharp downturn in the Philippines' terms of trade and the growing domestic opposition to Marcos' authoritarian rule. In response, the regime initiated both efficiency- and equity-oriented reforms at the national level.

In exchange for balance of payments support from the World Bank and the IMF, the regime undertook efficiency-oriented reforms to devalue the currency, tighten monetary policy, cut government spending and liberalize trade.⁷ The reform effort was seriously disrupted in 1983

by the assassination of opposition leader Benigno Aquino. The assassination sparked a major financial crisis. In 1984, the regime was finally forced to enact a stringent stabilization program in exchange for additional IMF and World Bank finance.

National circumstances in the last years of the Marcos regime favored equity-oriented reforms as well as efficiency reforms. As the Communist insurgency gathered strength in Luzon, Samar, Negros and Mindanao during the 1970s, Marcos sought to maintain the support of the U.S. and international financial institutions and to divide opposition movements in the Philippines through a combination of political "reforms," symbolic social welfare programs and the extension of his highly centralized political patronage network down to the local level (Wurfel 1988: 115-121, 127-33).

Marcos stepped up these efforts in the early 1980s as his domestic and foreign opponents became more vocal in criticizing the regime's record on land reform and poverty alleviation. In mid-1981, Marcos and his wife Imelda (in her capacity as Minister of Human Settlements), initiated the "Movement for Livelihood and Progress" (Kilusang Kabuhayan at Kaunlaran, or KKK) with a broad mandate to help the poor with interest-free loans and a budget of P2 billion, roughly 6% of the national budget (Wurfel 1988: 257-58). The KKK loan program rapidly degenerated into a patronage exercise par excellence, with "block grants" of ten to a hundred thousand pesos given out in the form of checks to mayors and governors.

In my analytic framework, the regime went through a political realignment in favor of both equity and efficiency reforms from 1981 through 1983. In 1984 and 1985, the financial crisis forced it to shift its attention to macroeconomic stabilization, and to sectoral budget cuts and tax increases that could help reduce the government's deficit.

⁷ Marcos' commitment to this stabilization and austerity program was questionable, though there were undoubtedly some technocrats in the Finance and Industry Ministries who strongly championed reform. Broad (1988: Ch. 5) argues that Marcos actively supported a "transnationalist" alliance of reform-minded domestic bankers and industrialists and their counterparts in the IMF and the World Bank. Haggard (1990) questions the depth of Marcos' commitment to efficiency-oriented reforms. He suggests that Marcos used reform initiatives tactically, to maintain the flow of IMF and World Bank loans, while keeping enough protected sectors to generate the rents necessary to maintain the patronage network that ultimately kept him in power.

2. Forest sector politics in the early 1980s: status quo beneficiaries and reform advocates

The loggers: In the forest sector during the first half of the 1980s, the Philippine logging industry was clearly in decline due to the dwindling area of well-stocked, old growth forest. The wood processing industries were grossly inefficient. Logging was still highly profitable, however, for loggers with access to remaining old growth forest areas.

To give a rough estimate of the magnitude of these profits, consider a well-stocked timber concession that actually followed BFD regulations by harvesting only its annual allowable cut. Under BFD regulations, the holder of a Timber License Agreement (TLA) following a 25-year cutting cycle in a well-stocked old growth forest could legally cut roughly 2 cubic meters per hectare per year (calculated from DENR 1995a: 33). A 30,000 hectare concession (the average size for 1980 (calculated from DENR 1995a: 33)) could legally harvest 60,000 cubic meters per year. The international market price for logs was roughly \$100 per cubic meter in 1980 dollars (DENR 1995a: 195), so the logging operation would generate total sales of \$6 million. Total extraction, processing and marketing costs might amount to roughly 50 percent of the market price for a logging operation of average efficiency (extrapolated from Bautista 1992: 45). The before-tax profit would therefore be \$50 per cubic meter, or \$3 million.

Bautista (1992: 40) calculates that if the logs were exported, and if the government collected all of the revenue due to it from various taxes and fees, its share of the \$6 million in sales would have been roughly 15 percent, or \$900,000. Thus, the concessionaire would end the year with an after-tax profit of \$2.1 million. Concessionaires paid only a nominal annual fee for their concessions and most rented their equipment, so they had very low capital costs (Boado 1988: 181). In other words, for a one year investment of \$3 million in operating costs, a concessionaire could earn an annual return of 66 percent (less perhaps ten percent in bribes to officials and kickbacks to Marcos himself). If the concessionaire evaded most taxes through under-reporting and bribes, he might further increase his profits, potentially by hundreds of thousands of dollars.⁸

⁸ Evasion of export taxes was very common during this period. Bautista (1990: Table II) examined the discrepancy between Japanese import statistics and Philippine export statistics and concluded that that 30 percent of all logs exported to Japan during the period 1976-80 were not reported for tax purposes.

Marcos had awarded the enormously profitable TLAs to some of his most important allies in the government (e.g. Defense Minister Juan Ponce Enrile), the armed forces (Army Chief of Staff General Fabian Ver), members of the Marcos family and long-time supporters from Marcos' home region of Ilocos in northern Luzon. As Vitug (1993: 17-31) chronicles, Marcos gave concessions to these individuals to bolster support for his regime, and used the threat of cancellation to extort his personal share of the profits from TLA holders. In 1980, 191 TLA holders controlled 6.5 million hectares of forest land, one fifth of the Philippines' land area (DENR 1995a: 33). Despite the strong need for revenues as the regime tipped into fiscal and political crisis in the early 1980s and the ludicrously low level of taxation in the forestry sector, Marcos' political dependence on his logging cronies made it difficult for the government to impose higher taxes on them.

The reformers: Compared to the loggers, advocates for efficiency and equity reforms had very little political influence over forest sector policy in the early 1980s. Only the need for fiscal reforms to shore up the national treasury prompted Marcos to raise forest taxes and appoint a relatively honest technocrat, Teodoro Pena, to collect them as Minister of Natural Resources. As the fiscal crisis peaked in 1985, a second set of efficiency advocates outside the forest sector again tried to crack down on corruption in the logging industry. A high-level task force on "anti-dollar salting," chaired by the Minister of Trade and Industry, targeted the logging industry among others where export tax evasion was rampant.

As fiscal reformers sought to raise revenues from commercial forestry, equity advocates tried to build on the government's stated concern with the rural poor to enact new "social forestry" policies. In 1980-81, a network of academics, domestic and international NGOs advocated the reform and expansion of social forestry as a way to achieve both equity and environmental goals in the sector. Lacking senior-level support in the Ministry of Natural Resources, they were vulnerable to cooptation of their programs by forestry officials with other ideas about the use of government funds.

3. The reform proposals and their fate

Raising revenue from the logging industry: Marcos had attempted to promote value-added wood processing by banning log exports as early as 1973, but he had repeatedly suspended the ban in the face of opposition from the logging industry. In 1979, he increased the export tax on logs from 10 to 20 percent, claiming that the measure was an interim step on the way to a log export ban (Bautista 1992: 24-25). In 1980, he raised charges on domestic logs from 3 to 20 pesos per cubic meter for high value species; the new, higher fees were roughly two to three percent of the logs' sale price (Bautista 1992: 28).

Collection rates did not keep pace with the increase in the nominal rates: though forest charges rose by a factor of nearly seven in 1980, the amount collected rose by a factor of two (DENR 1995a: 199). The total amount of export taxes collected jumped by a factor of more than six in 1979 as customs officials cracked down on evaders, but then fell by half in 1980-81 before rising again in 1982 (World Bank 1989: 146). Presumably, the logging industry was "adjusting" to the increased collection pressure in 1980-81 by developing new ways to evade the export tax.⁹

As the fiscal crisis deepened in 1981, Minister of Natural Resources Teodoro Pena attempted to "clean up" corruption in the forest sector and raise government revenues, ostensibly with support from Marcos. Yet Pena had very limited political resources to meet these goals. His formal authority as Minister of Natural Resources depended entirely on Marcos' continuing support. Moreover, within the Ministry, his formal authority over the BFD meant little. BFD Director Edmundo Cortes, a Marcos patronage appointee, retained the nominal authority to decide individual regulatory cases, and direct control of the BFD's budget, which was more than half of the Ministry's total budget. Marcos himself had the final say on log export quotas, and on the granting and cancellation of timber licenses. Cortes sent his recommendations on cases that involved Marcos cronies directly to the President, not to the Minister (Vitug 1993: 33).

Because it was still possible for concessionaires and wood processors to earn high profits in the forest sector, but profits were being squeezed both by the gradual depletion of the most

⁹ Evidence supporting the hypothesis that tax evasion increased in these years comes from a study by Pernikar (1984: 39), who compared Philippine log export statistics with its trading partners' import statistics, and the domestic volume on which BFD levied charges to domestic wood production statistics. He concludes that the untaxed log production doubled from 1980 through 1982, from 1.5 million to 3 million cubic meters. Legally reported production fell from 6.3 million to 4.1 million cubic meters over the same period.

profitable forests and the government's attempts to improve revenue collection, Pena's efforts to collect export taxes and domestic logging fees were frustrated. Collection rates did rise by a factor of three from 1980 to 1981, but then began to fall off again and continued to decline through 1985 (DENR 1995a: 199). Bautista's (1992: 48) comments on the failure to increase collection rates in the early 1980s are illuminating:

there was a strong incentive to evade taxes and engage in illegal activity, especially by less efficient suppliers. Through outright non-reporting, smuggling, or under-scaling, classification and collusion, inefficient producers retained much excess profit while government hardly secured any...rather than leave the industry for other business endeavors or improve their efficiency, inefficient firms may have resorted to tax evasion, transactions with illegal loggers, and lobbying efforts against taxes.

Thus, even though the national fiscal crisis favored Pena's efforts to increase taxes and promote efficient management in the forestry sector, the forest products industries still had a substantial financial interest in maintaining the status quo. Through national and local patron-client networks, leading loggers, lumber mill owners and wood product manufactures could use their financial resources and political connections to block the initiation of major reforms, and to undermine the implementation of even the modest reforms that were enacted.

In contrast to Pena's efforts at the Ministry of Natural Resources, the efforts of the Presidential Task Force on Anti-Dollar Salting in the last year of Marcos' rule were somewhat more successful. The Task Force identified 12 logging companies that had under-reported their exports, and got Marcos to revoke the TLAs of most of them. Even more impressive, some of the companies whose TLAs were revoked were owned or protected by Armed Forces Chief of Staff Fabian Ver and Defense Minister Juan Ponce Enrile (Vitug 1993: 29).

Why did the Task Force have some success where the Minister of Natural Resources had failed? The reasons probably have to do with the changing relationship between national and sectoral actors as the country's political crisis deepened. When Pena took office, the fiscal crisis was serious but the regime was not in jeopardy. Further, his attempts to raise tax levels and collection rates aroused opposition from the whole industry, not only a few "bad" companies. Finally, he had no political base independent of his formal position. In contrast, the Anti-Dollar

Salting Task Force operated at a moment when the fiscal crisis threatened the regime's survival, it targeted only a subset of firms in the industry, and Trade Minister Ongpin's credibility with the IMF and international investors made him indispensable to Marcos.¹⁰

Promoting social forestry: As noted above, the Marcos regime's renewed concern for the rural poor in the early 1980s provided an opportunity for equity advocates in the forestry sector to advance their reform goals. There was in fact a well-organized group of advocates within the Bureau of Forest Development: the Upland Development Working Group (UDWG). The UDWG was a policy development forum created in 1980 by a coalition of university-based social forestry researchers and Ford Foundation representatives, with modest support from mid-level officials in the BFD. Its participants included the core group of advocates, representatives from NGOs involved on upland development projects, and mid-level officials in BFD under the chairmanship of the BFD's Assistant Director; BFD Director Cortes showed little interest in the program (del Castillo 1995).

Members of the UDWG used the regime's increasing concern about rural unrest to push for the reform of the government's small, lackluster social forestry programs. They met with Minister Pena after his appointment in 1981 to present their case. Social forestry advocates did not propose giving *kaingineros* any rights to harvest trees. Rather, its members argued that they should be given long-term tenure on degraded forest lands (25 years, versus the three years allowed at the time); community organizing and extension services; and low-cost credit. In exchange, participants in the social forestry program would have to follow the 1975 Forestry Code's requirements to reforest part of their land and to refrain from clearing any more forested areas (PC1 1995, PC7 1995).¹¹

Social forestry advocates had wanted to promote a multi-year participatory research effort, which would not expand from pilot projects to national implementation until the results of careful household- and community-level studies using different combinations of conditional tenure, technical assistance and credit could be used to guide policy. As the Marcos' grandiose and corrupt KKK program gained momentum in 1981, however, Ministry of Natural Resources and BFD officials decided that they could benefit by linking a dramatically expanded social

¹⁰ It may also be true that as the crisis became more serious and Marcos' authority deteriorated, powerful concessionaires like Ver and Enrile were less inclined to risk major public confrontations.

¹¹ PC = Personal communication. Please see the last part of the bibliography for further information.

forestry program to the KKK, and to the regime's counterinsurgency efforts in the uplands. This temporary convergence of interests led to the initiation of the Integrated Social Forestry Program (ISFP) in 1982 by Presidential Letter of Instruction 1260 (Aquino et al. 1987: 17, 21; PC1 1995). The Ministry of Natural Resources was designated as the lead agency, with support from the Ministry of Human Settlements and various other agencies involved in agriculture, rural development and poverty alleviation.

From 1982 to the fall of the Marcos regime in 1986, the social forestry program was dominated by senior forestry officials and their counterparts in the KKK, who used it both for equity-oriented symbolism and for political patronage. At the end of 1985, the program claimed to have involved 130,000 families and issued 50,000 tenure certificates (World Bank 1989: 151), but these figures must be interpreted with skepticism. According to program managers and informed observers, the award of tenure certificates had become a way for the regime to demonstrate a symbolic commitment to land reform. The BFD's social forestry division was grossly understaffed to provide support services or to enforce reforestation and forest protection rules in ISFP communities. Further, the tenure certificates were not transferable, so no banks would accept them as collateral for loans. Crippled by these serious flaws in program design and implementation, the ISFP had little impact on equity or the environmental protection in the Philippine uplands (ADB 1988: 14; PC1 1995; Aquino et al. 1987:17, 21; del Castillo 1995).

Banning logging in deforested areas: Marcos had begun to impose logging moratoria in "critical watershed" areas in 1968. In general, the moratoria were imposed in areas whose forests were stripped of commercially valuable timber, particularly in the Visayas. Marcos used his discretionary authority to grant exemptions to the moratoria when it was in his political or economic interest to do so (Bautista 1994: 3). In 1985, Marcos imposed a moratorium that affected most of the Visayas, as well as some heavily deforested provinces in other islands. His motivations for imposing the ban are unclear. As in previous instances, he may have wanted to respond to local complaints about the negative impacts of logging on agriculture and water systems. It is also likely that he wanted to use the moratorium to gain public support at a time when his popularity was falling to all-time lows. Finally, he may have wanted to gain additional rents by granting exemptions to the few profitable concessions left in the three regions where the

ban was imposed. Whatever his motivations, the ban was not seriously enforced, and its impact on environmental protection was negligible (Boado 1988: 176)

4. Conclusion

Despite a national fiscal crisis and the appointment of a relatively clean Minister of Natural Resources, the Marcos regime's tax collection efforts were frustrated by the strong informal ties between forestry officials, prominent loggers and the President. Social forestry advocates had somewhat greater initial success, primarily because their proposals complemented the KKK program's equity goals and the regime's counterinsurgency efforts, and did not directly challenge the Marcos patronage system in the commercial subsector. Nevertheless, their initiative was soon coopted by forestry officials who used it as a traditional patronage vehicle.

The Marcos regime failed to enact significant reforms in the forest sector despite national crises that offered a window of opportunity for efficiency- and equity-oriented reformers. There were three insurmountable obstacles to reform. First, at the national level, the patronage system that had allowed Marcos to control the country and amass enormous personal wealth had also become essential to his political survival. Marcos could not implement reforms that would seriously hurt the financial interests of his clients without jeopardizing his own hold on power. Second, the extraordinary concentration of logging benefits within a small group of highly influential Marcos cronies made the forest sector particularly resistant to reform. Third, sectoral advocates for efficiency- and equity-oriented reforms were not nearly as well organized or influential as status quo beneficiaries, who easily blocked or derailed their initiatives.

The only partial success in the last Marcos years was the Anti-Dollar Salting Task Force crackdown in 1985. Only the combination of an extremely grave fiscal crisis and a highly influential Minister with a power base outside the forest sector pushed Marcos to revoke concessions from the most egregious tax evaders. In any event, the crackdown came far too late to solve any of the regime's fiscal or political problems, or to change the behavior of other logging companies.

B. The Aquino government, 1986-1992

In the analytic framework used here, national and sectoral circumstances combined to make a U-shaped "reform feasibility curve" during the Aquino government's six years in office. The first year and a half of the Aquino administration, from February 1986 through July 1987, provided national circumstances that strongly favored equity and efficiency reforms. At the sectoral level, loggers linked to Marcos were highly vulnerable to executive actions canceling their concessions and/or confiscating their assets. Sectoral reformers, however, were only weakly organized during this period.

During the middle years of the Aquino term (1987-89), the conservative realignment in the administration and the renewed influence of logging networks through Congress made it far more difficult for reformers to advance their goals in national policy making fora. On the other hand, the appointment of Factoran and his team at DENR, and their success in gaining funding and supportive policy conditions from several international aid agencies, gave reformers direct control of DENR's considerable administrative authority. Thus the major reform initiatives during the period from the fall of 1987 through the spring of 1990 came from within DENR.

In 1990, the continuing efforts of reformers within DENR, international aid agencies, and national environmental and equity advocacy coalitions, coupled with renewed fiscal crisis, led to a dramatic increase in logging fees and a ban on logging in old growth forests. These reforms finally crippled the logging industry as a political force at the national level. After 1990, national attention to the forestry sector dwindled, but equity- and environment-oriented reforms had been relatively well-institutionalized at the sectoral level, and reformers within DENR had enough influence to continue implementing the policy reforms they had initiated.

1. The national context for reform: the Aquino administration's goals, constraints and crises

The Widest Window, 1986-87: At the national level, the ouster of Marcos and the advent of the Aquino government provided very favorable conditions for policy reform. During the first two years of the Aquino government's term (1986-87), there was widespread anger against Marcos and his cronies. Aquino successfully ejected Marcos supporters from senior positions in government and business.¹¹ Her economic advisors also proposed a major redirection of national

economic development strategy. The Aquino government's Medium Term Development Plan (NEDA 1986) proposed to address the "root causes" of the country's economic and political crises through a development strategy that concentrated on alleviating rural poverty. The elimination of key status quo beneficiaries from positions of formal authority and the declaration of an equity-oriented development strategy created nearly ideal conditions for the initiation of efficiency and equity reforms, at least those which could be tightly targeted on Marcos cronies.

On the other hand, the Aquino government desperately needed the support of the broader economic elite and the military in order to defeat revolutionaries on the left and military coup plotters on the right. The need to maintain support from the traditional oligarchy and the military tightly constrained the Aquino government's options for efficiency- or equity-oriented reforms that went beyond the removal of Marcos-era patronage structures.

With substantial balance of payments support and debt rescheduling from the World Bank, IMF and the U.S., the Aquino government was able to use the 1986-87 window of opportunity to abolish most Marcos-era monopolies, monopsonies and other rent-generating market restrictions; the government made some progress in trade and finance liberalization as well (Dohner and Haggard 1994: Ch. 4). It also undertook a large rural public works program, the Community Employment and Development Plan, and drafted a limited land reform program for ratification by the Congress (Putzel 1992: Ch.6).

The Oligarchy Returns, 1987-89: After the elected Congress convened in July 1987, the Aquino government no longer had the option to use extraordinary executive powers to initiate reform. Moreover, this Congress, which continued through 1992 under a special constitutional provision, was dominated by the urban and rural economic elite. It blocked both the expansion of the government's import liberalization program and the enactment of redistributive land reform (Putzel 1992: Ch.8; Wurfel 1988: 321-23).

Violent opposition to the government from the left and right continued throughout Aquino's term. Successful counterinsurgency campaigns and dwindling popular support blunted the threat from the left by the end of 1989. Right-wing plotters within Aquino's own armed forces posed a more serious threat. From August 1987 through December 1989, politicized

¹¹ There were several important exceptions, most notable among them Defense Secretary Juan Ponce Enrile and AFP Chief of Staff Fidel Ramos, both of whom had defected from Marcos to lead the military coup effort in 1986.

elements of the military, closely allied with Senator Juan Ponce Enrile, framed the government's land reform and other rural equity measures as "appeasement" of the left and used them as excuses for a series of coup attempts (Steinberg 1994: 156-67).

Economic crisis, 1990-92: After the 1989 coup attempt and a series of natural and external shocks during 1990, loss of investor confidence led to a renewed economic crisis. From early 1990 through the end of her term in June 1992, Aquino was forced to devote most of her attention to macroeconomic stabilization, while fending off radical opponents on the left and right to ensure a democratic succession to the Presidency (NEDA 1990; Steinberg 1994: 181-84). As had happened at the end of the Marcos era in 1984-85, the coup attempt and the ensuing economic crisis of 1990-91 closed the window for far-reaching equity-oriented reforms, but re-opened the window for efficiency-oriented reforms.

The growth of Philippine environmentalism, 1986-92: Though the national political climate became less favorable to equity and efficiency reforms after 1987, environmental protection continued to gain popular and elite support. Environmentalism, was not a significant element in Philippine national politics until the late 1980s. At that time, environmental concern in general and concern about deforestation in particular began to rise. In 1988, a number of environmental NGOs organized an umbrella federation, Green Forum. From 1988 through 1991, local and regional organizations helped communities protest against logging and its environmental damage. Beginning in 1989, a national NGO campaign (with support from two prominent Senators) advocated a total ban on logging (Magno 1993). The environmental movement's influence peaked in the run-up to the May 1992 Presidential and Congressional elections. Flash floods attributed (at least by the media and NGOs) to excessive logging killed several hundred people in Leyte in November 1991. Subsequently, a number of Presidential and Congressional candidates declared themselves environmentalists and promised to support restrictions on commercial logging, fishing, mining and industrial pollution (Vitug 1993: Ch.4).

In the framework used here, the Aquino government faced both equity and efficiency crises in 1986-87, creating substantial opportunities for sectoral reforms that could meet these macro-objectives. From 1987 through 1989, the election of a conservative Congress, the weakening of the leftist insurgency, and the growing threat of a military coup constituted a

conservative political realignment that reduced opportunities for both kinds of reform. From the beginning of 1990 through the inauguration of President Ramos in June 1992, macroeconomic crisis diverted the attention of senior government leaders from sectoral reforms, with the partial exception of those that could contribute to budget and/or balance of payments support. Environmental reforms were another partial exception, due to the greater political organization of environmental NGOs and growing popular awareness of environmental problems.

2. Loggers and reformers in the forest sector, 1986-92

The Loggers: The logging and wood processing industries continued to decline financially throughout Aquino's term. They were not helped by senior officials in the reorganized Department of Environment and Natural Resources (DENR), who sought to reduce their political influence by canceling concessions for regulatory violations, and by dramatically reducing the number of new TLAs issued. Nevertheless, the loggers who survived the Marcos crony purges of 1986-87 were able to rebuild some of the industry's political influence, primarily through the use of patronage networks at several levels of government.

These networks linked loggers, mill owners and construction businessmen with mayors, governors and Congressional representatives.¹² Local patronage networks frequently exercised influence at the national level through individual Congressmen. They also maintained an organized national lobbying group, the Philippine Wood Producers' Association (PWPA). The PWPA advocated for the interests of commercial loggers, and to a lesser extent those of wood processors, throughout the Aquino term. The PWPA gradually lost influence, however, as the number of active logging concessions and well-established, well-connected loggers dwindled (PC12 1996). This point is fundamental and cannot be overstated: the rents available from logging in the Philippines were dropping substantially as the remaining old-growth forests were depleted, and the logging industry's political power was falling commensurately (see Figure 4 and

¹² A significant, though difficult to estimate number of elected officials also operated or invested directly in logging and wood processing firms. In the first post-Marcos Congress (1987-92), eight Congressmen (out of 200) had logging contracts or owned logging companies in their own names. This figure significantly understates the number of Congressmen with direct ties to the logging industry, and their clout. For example, the Chairman of the House Natural Resources Committee, Jerome Paras, represented logging firms from his district in their struggles with DENR. The Speaker of the House, Ramon Mitra, opposed a ban on commercial logging largely because one of his most important constituents controls most of the logging in Palawan (Vitug 1993: 92-100).

Table 1). Nevertheless, loggers with access to the remaining well-stocked areas still had strong financial incentives to maintain the status quo and substantial financial resources with which to influence government policy.

PRODUCTION AND EXPORT OF MAJOR FOREST PRODUCTS: 1980 - 1994 (VOLUME IN THOUSAND CUBIC METERS)

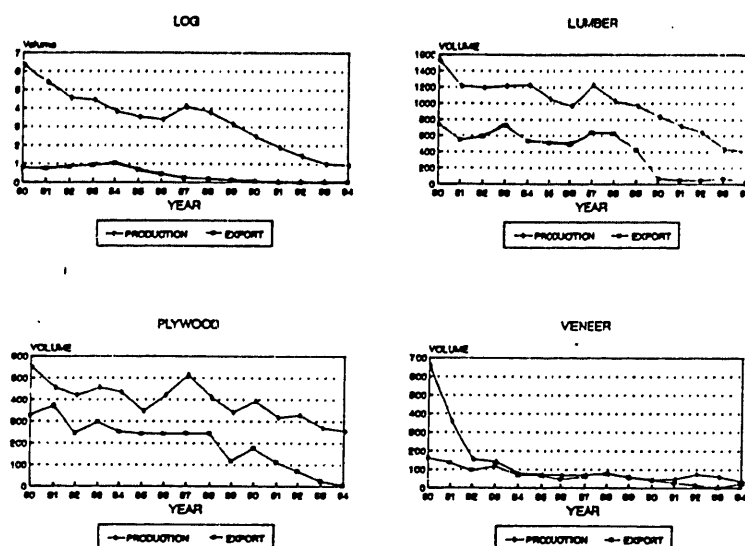


Figure 4. Source: DENR (1994: 60).

GROWTH RATE OF GROSS VALUE ADDED (GVA) IN FORESTRY: 1975-1994 (in percent)

| Year | At Constant Prices | At Current Prices |
|-------------|--------------------|-------------------|
| 1993 - 1994 | (15.04) | (14.36) |
| 1992 - 1993 | (16.46) | (17.64) |
| 1991 - 1992 | (12.15) | 3.39 |
| 1990 - 1991 | (34.90) | (26.56) |
| 1989 - 1990 | (21.03) | (20.05) |
| 1988 - 1989 | (8.27) | (15.09) |
| 1987 - 1988 | 6.33 | 20.30 |
| 1986 - 1987 | (0.92) | 10.46 |
| 1985 - 1986 | (7.37) | (9.12) |
| 1984 - 1985 | (7.71) | (12.40) |
| 1983 - 1984 | (6.59) | (64.47) |
| 1982 - 1983 | (16.68) | 2.58 |
| 1981 - 1982 | (16.34) | 19.51 |
| 1980 - 1981 | (15.22) | (8.78) |
| 1979 - 1980 | (3.41) | 31.72 |
| 1978 - 1979 | (8.25) | 8.06 |
| 1977 - 1978 | (1.20) | 26.62 |
| 1976 - 1977 | (0.69) | 13.19 |
| 1975 - 1976 | 26.01 | 16.66 |

Source: National Statistical Coordination Board

Table 1. Source: DENR (1994: 209).

In sum, the influence of the loggers on forest policies during Aquino's term was lowest in 1986-87. At this time, the Marcos patronage network was breaking up and the new (or revived) Congress-centered networks had not yet taken shape. The influence of loggers increased from 1987 through 1990, as they worked through the PWPA, and through reconstituted patronage networks linking individual loggers to Congressmen and to mid-level officials in the DENR. After 1990, however, the continuing decline in their numbers and financial resources and the rise in public concern about logging's environmental impacts made it more difficult for the logging industry to influence the direction of policy.

The Reformers: Reform advocates in the forestry sector during the Aquino term included senior officials at DENR, domestic NGOs, and international aid agencies. Led by DENR Secretary Fulgencio Factoran, the DENR-based reform team formed alliances with NGOs and aid agencies to expand their political base and their financial resources. Despite some internal disagreements, the reformers were able to build a coalition strong enough to initiate several reforms within DENR, and eventually to challenge the logging industry in Congress.

The DENR team: The most influential reformers were senior officials at DENR. Aquino's third appointee as Secretary of Environment and Natural Resources, Fulgencio Factoran, quickly appointed a strong "change team" of senior officials when he took office in March 1987.¹³ Factoran and his team served through 1992, surviving several cabinet shakeups and Congressional challenges by virtue of their imaginative and credible reform initiatives. These senior DENR officials sought to advance equity, environmental and efficiency goals. Because of his personal beliefs, his experience as a human rights lawyer and political activist under Marcos, and his legal work with indigenous peoples, Factoran tended to give highest priority to social equity (particularly reallocating forest land and forest use rights from commercial firms to indigenous peoples and upland settlers, and giving poor households and local cooperatives preference in the award of reforestation contracts). Environmental protection (primarily reforestation of degraded watersheds, but also protecting remaining old growth forests) was the DENR's number two

¹³ Aquino dismissed her first appointee, Ernesto Maceda, in November 1986 after media reports suggested that he was abusing his authority. She then appointed Deputy Secretary of Agriculture Carlos Dominguez as the interim DENR Secretary while searching for a long-term replacement (Vitug 1993: 39-47). The term "change team" is used by Waterbury (1992) to describe senior officials in an agency who have a mandate to undertake reforms that will impose costs on status quo beneficiaries, and who have some political insulation from those beneficiaries.

priority. Economic efficiency (e.g. competitive bidding for logging concessions, higher forest charges, addressing market and policy failures to promote commercial tree plantations) usually had the lowest priority unless it was directly linked to either equity or efficiency goals (PC5 1996).

Domestic NGOs: Along with the DENR leadership, NGOs which had been working in upland areas with migrants and indigenous peoples provided the strongest voice for equity-oriented reforms in the forestry sector. Many of these NGOs had been loosely allied with the non-Communist left, and some had been tacit supporters of Communist and Moslem insurgents. The ouster of Marcos allowed them to expand their community organizing efforts with less fear of repression, though they continued to face military harassment in areas with active Communist and Moslem insurgencies (PhilDHRRA 1994; Miller 1994).

Through the late 1980s, most NGOs remained suspicious of the DENR leadership and its community forestry programs. Many also clashed with DENR on the campaign for a commercial logging ban, a proposal which DENR leadership rejected as a political non-starter and a risky strategy in areas which did not have community-based management institutions to take over from commercial loggers. To win political support from NGOs and gain their assistance in implementing their community-based forestry programs, DENR actively sought to employ NGOs (via reforestation and community organizing contracts) as paid intermediaries between the government and upland residents. As dialogue between DENR and NGOs became better institutionalized and a number of NGOs acquired a stake in the success of DENR programs, relations became less adversarial, and there were some joint policy initiatives (e.g. on recognition of indigenous peoples' land claims and joint management of national park areas) (see UNAC 1991 and 1992a).

As noted above, advocacy for environmental protection grew stronger and better organized in the late 1980s, and had a direct impact on the forest sector through the campaign for a commercial logging ban (loosely coordinated by the Haribon Foundation through the umbrella NGO Green Forum); two "green" senators, Orlando Mercado and Aquilino Pimentel, also played important leadership roles in this campaign. Other environmental NGOs (particularly the USAID-endowed Foundation for the Philippine Environment) advocated for biodiversity

conservation (see Magno 1993, FPE 1995), and the Legal Rights Center advocated for the rights of indigenous peoples (see e.g. La Vina 1994).

Though not as directly involved in policy advocacy as the NGOs, the Philippine media also played an important role in the reform process. Media reporters exposed corruption in commercial logging, highlighted (sometimes exaggerated) the environmental damage from deforestation, and showcased some of the more successful local efforts to stop illegal logging and institutionalize community management (see e.g. PCIJ 1991).

International aid agencies: The DENR team formed alliances with several international aid agencies that were supporting both national and sectoral reforms. Most important in the forestry sector were the Asian Development Bank (ADB), the World Bank, the US Agency for International Development (USAID) and the Japanese Overseas Economic Cooperation Fund (OECF). All of these agencies had funded projects in the Philippine forestry sector beginning in the 1970s, mainly reforestation of watersheds upstream of large dams, but also including social forestry and commercial tree plantations. The total amount of funding had been relatively low, however, amounting to less than \$50 million total over the previous decade (ADB 1988: Appendix 23).

During Aquino's term, these agencies committed more than \$800 million in forest sector aid to the Philippines, making it by far the world's largest recipient of tropical forest aid in those years (ADB 1994: Appendix 5; FAO 1995). The massive increase in aid was due to three factors. First, each of the four major agencies was looking for ways to provide quick-disbursing "sectoral adjustment" or "program" loans to help the Philippines meet its debt service obligations and pay for imports.¹⁴ Second, the DENR team made the forestry sector an attractive vehicle for quick-disbursing aid by demonstrating a credible commitment to major forest policy reforms and by proposing an ambitious national reforestation program which would require a large amount of aid to finance. Third, the late 1980s was a period of rising international concern about the global environment in general and tropical forests in particular.¹⁵ Environmental activists were using this

¹⁴ The World Bank's structural adjustment programs of the early 1980s had pioneered the move from "project" to "program" and "adjustment" lending. Adjustment loans disbursed large sums quickly to recipients in exchange for policy reforms; program loans also disbursed quickly to fund a large number of discrete investments. Both forms of loan moved much more money, and moved it more quickly, than the Bank's traditional project loans (cf. Jayarajah and Branson 1995: 107-110).

¹⁵ The Tropical Forest Action Plan, which sought to increase funding for sustainable forest management by

concern to attack the World Bank (and other major aid agencies, to a lesser extent) for funding projects and programs that harmed the environment and the poor (Rich 1985, 1990). In response, all of these agencies were eager to fund "environmentally friendly" programs and projects. From donors' perspective, the Philippines forestry sector was in the right place, with the right team, at the right time.

In general, the aid agencies were the strongest advocates for efficiency in the sector. They placed somewhat higher priority on efficiency reforms (e.g. competitive bidding, forest charges, commercial tree plantations) than the DENR leadership. At particular moments, efficiency advocates in the aid agencies gained additional support from Department of Finance officials who were interested in raising revenues to reduce budget deficits, but these links between sectoral and national efficiency advocates were not well-institutionalized.

Environmental protection was the second highest priority for the major aid agencies, reflecting their desire to "green" their operations in response to international NGO criticism. Though all of the major aid agencies supported the DENR's push for democratizing access to the Philippines' forests, the major impetus for equity-oriented reforms came from DENR, not from the aid agencies (PC5 1996; PC4 1995; PC15 1996; PC16 1994).¹⁶

In sum, senior officials at the DENR were the most influential advocates for equity and environmental reforms during the period 1987-92. Their substantial political resources included their formal authority to regulate the allocation and use of public lands, to represent the government in negotiations with international agencies, and to convene experts and interested

coordinating donor efforts through national action plans, was initiated in 1985, under the joint leadership of the UN Food and Agriculture Organization (FAO), the World Bank, the World Resources Institute and the International Union for the Conservation of Nature (IUCN). During its first five years of operation, it drew intense scrutiny and criticism from Northern and Southern NGOs. The NGOs accused the agencies involved in implementing TFAP, especially the World Bank and FAO, of continuing to fund unsustainable logging in tropical forests. See Winterbottom (1990), FAO (1995).

¹⁶ There were also some idiosyncratic differences in emphasis among the agencies. ADB and the Japanese financed a loan with a strong emphasis on reforestation; along with its desire to support Aquino and environmental protection, Japan also had an interest in maintaining a supply of raw logs and semi-processed wood for the Japanese market (ADB 1988). The World Bank (through the Global Environment Facility) was the leading supporter of biodiversity conservation and also financed the development of a system for policing illegal logging (World Bank 1991a). USAID endowed an NGO consortium, the Foundation for the Philippine Environment, which took a leading role in promoting community-based management of national parks. Influenced by the free market orientation of the Reagan and Bush administrations, USAID also supported efforts to deregulate and privatize the forest products industries (USAID 1990).

parties to develop and debate proposed policy reforms.¹⁷ In alliance with the international aid agencies, DENR leadership also controlled the allocation of over \$500 million in Philippine currency to finance reforestation and forest management programs.¹⁸ The DENR leadership also gained conditional support from equity- and environment-oriented NGOs, and through them gained some allies among the more progressive members of Congress and the Senate.

3. Reform proposals and outcomes, 1986-92

Ousting Marcos cronies, 1986: The Aquino administration's first executive order created the Presidential Commission on Good Government (PCGG), to sequester assets and contracts held by Marcos cronies until it could be determined whether they had been acquired legally or not (Steinberg 1994: 155). A number of logging concessions held by Marcos' closest associates--General Ver, "businessmen" Alfonso Lim and Rodolfo Cuenca, and members of the Romualdez family (Imelda Marcos' clan)--were sequestered by the PCGG. Most of them continued to operate, however, under the control of managers appointed by the PCGG. Most of the managers were members of the pre-Marcos political elite, and some of them became part of the constituency for maintaining the status quo in commercial logging (Vitug 1993: 42-44).

At the sectoral level, Aquino's first appointee as Minister of Natural Resources, Ernesto Maceda, took advantage of the political weakness of Marcos cronies and the extraordinary powers of the executive prior to the convening of the first post-Marcos legislature to cancel a number of Marcos crony concessions. He also imposed a ban on log exports, though the government's enforcement machinery remained inadequate to the job (Quintos 1989).¹⁹ Maceda was not strongly committed to sectoral reforms. Instead, he began to set up his own patronage network inside the Ministry, making a number of questionable decisions that led Aquino to dismiss him in November 1986 (Vitug 1993: 39-42).

¹⁷ Aquino's 1987 Executive Order 192 renamed the Ministry of Natural Resources the Department of Environment and Natural Resources and mandated some basic elements of its organizational structure to conform to the presidential system of government. DENR continued to manage public forest land in accordance with Marcos' Presidential Directive 705 of 1975 (the revised Forestry Code), which gives the agency's head very broad regulatory authority to ensure sustainable use of forest resources.

¹⁸ The remainder of the \$800 million in foreign exchange was provided directly to the Philippine Central Bank for general budgetary support and was not under the direct control of the DENR.

¹⁹ Maceda was a well-known member of the pre-Marcos political elite who had opposed Marcos during the martial law period and supported Aquino's run for the Presidency in 1986.

The administration's first attempts at reform in the logging sector led to a transfer of assets, not a fundamental change in the political economy of commercial logging. They did publicize corruption and eliminate some of the most influential figures in the logging industry, disrupting patron-client networks and establishing a precedent that sectoral reformers built on over the next several years.

Forest Lands and Land Reform, 1987: After forcing Maceda out, Aquino appointed a caretaker Secretary at the renamed Department of Environment and Natural Resources. During the critical first quarter of 1987, when the Aquino government faced daily challenges to its legitimacy, there were no strong senior-level reformers within the DENR. Instead, the most important proposal for forest sector reforms came from the Office of the President itself.

Immediately after it took office, the Aquino government came under great pressure from its left-wing supporters to make good on its promises of rural poverty alleviation. This pressure came to a head in January 1987 with the "Mendiola Massacre," when the Presidential palace guard opened fire on peasants demanding land redistribution (Putzel 1992: 221-28). In response, Aquino created a Cabinet Action Committee on Land Reform.

As it became increasingly clear that the government would not risk alienating key economic and military elites by forcibly redistributing private lands, the Committee started to look seriously at ways to transfer public lands to the landless. In February, representatives from the Department of Agrarian Reform (DAR) proposed privatizing up to five million hectares of degraded public lands by transferring them from the DENR's jurisdiction to the DAR's. It is not clear whether DAR thought that most of the lands it proposed to transfer were already deforested, but it specifically included "logged-over areas" and "areas of canceled/expired public land leases" in its proposal (Putzel 1992: 223).²⁰ In any case, the DAR proposal would have allowed a significant amount of the country's secondary forest to be cleared and used for agriculture.

Fulgencio Factoran was a member of the Cabinet Action Committee first as a presidential assistant and then (beginning in March 1987) as Secretary of the Department of Environment and

²⁰ At the time, well-stocked forests were estimated to cover 2-3 million hectares of public land, logged-over forests 5-8 million hectares and cultivated areas mixed with brushland were estimated to cover roughly 5-7 million hectares of public land each, leaving it unclear how much of the total area to be transferred would be forested. See the discussion of the range of estimates of forest cover during this period in Putzel (1992: 52-56) and in World Bank (1989: 9-13).

Natural Resources. Knowing that he was going to become DENR Secretary, Factoran opposed the DAR proposal. He argued that even if the transfer were a good idea, which he doubted (most logged over forests were on sloping ground with poor soil, and would not sustain annual cropping for more than a few years), the newly approved constitution prohibited the alienation of public forest lands. Instead, he proposed that the DENR expand and revise the Integrated Social Forestry Program (ISFP); its tenure certificates would be made heritable and transferable, so that those holding them could use them as collateral for bank loans (PC5 1996; PC10 1996). Factoran was ultimately able to persuade the Committee not to take away a third of the land under his agency's control.

This episode nicely illustrates the interplay of national circumstances and sectoral advocacy in shaping the timing, content and fate of reform proposals. National political unrest forced the Aquino cabinet to focus on land reform, despite its reluctance to challenge the landed elite. Public lands, including logged over forests, were an option that would not raise serious opposition from private landowners. Only when Factoran began to advocate on behalf of DENR's institutional interest in keeping control of the country's forests, and the national interest in regenerating forest cover, was the proposal transformed into an expansion of the social forestry program. Factoran's victory depended not only on his ideas, but also on his national-level connections. His privileged position as a close confidant of the President and her Executive Secretary, Joker Arroyo, gave him enough influence in the Cabinet Action Committee to prevail over the interests of the acting Secretary of DAR, Jose Medina, a Marcos-era holdover at DAR who was not strongly committed to land reform and not close to the President (Putzel 1992: 310).

The National Forestation Program, 1986-88: Like the proposal to use forested land for land reform, the idea for the National Forestation Program (NFP) was initially developed outside the DENR. The NFP aimed to meet equity and environmental objectives by paying small farmers and cooperatives to reforest erosion-prone areas of degraded public forest lands. Members of Aquino's economic advisory team proposed the idea in 1986 as a component of the government's rural public works strategy, the Community Development and Employment Program. They set an ambitious target: reforesting 100,000 hectares annually over next six years, a rate more than five times greater than the Bureau of Forestry's reforestation programs had ever achieved (NEDA 1986: 121).

Because the NFP targeted degraded forest lands, it did not arouse opposition from the logging industry, and it had substantial, if diffuse, public support. What it lacked was a well-designed plan of action for mobilizing, organizing and training upland residents, and the financial resources to pay for their labor and materials. Under Minister Maceda, the Ministry of Natural Resources did little to move the NFP forward. In the fall of 1987, Factoran and his team at DENR reached agreement with the Asian Development Bank on a \$120 million loan to fund the NFP and several associated social forestry programs. The Japanese Overseas Economic Cooperation Fund (OECF) agreed to match the ADB loan with another for the same amount. Unlike the ADB loan, the OECF loan was to provide general balance of payments support, with the understanding that it was being provided in exchange for the Philippine government's commitment to forest sector policy and institutional reforms outlined in the ADB reforestation loan (ADB 1988: 49-61).²¹

The NFP's reforestation contracts not only helped meet equity and environmental protection goals, but also provided the DENR with a very useful political resource. DENR senior officials channeled some reforestation funds to Congressmen and local politicians, with cursory checks on the actual use of these funds (Korten 1994: 975; Severino 1994; UNAC 1992b: 12-15). At the national level, DENR officials used the funds strategically, to buy the support of Congressmen who might otherwise have fought much harder against DENR's policy of reducing the area and number of commercial logging concessions (Ross 1996a: 35). As Factoran himself acknowledged, "We had to make a political decision. We chose to distribute reforestation funds to congressional districts to make congressmen cooperate" (quoted in Vitug 1993: 61).

Taking its cue from the national-level Community Employment and Development Program, the DENR team developed the concept of contract reforestation and secured ten times more foreign funding for the program than the forest sector had received for any previous investment project (see ADB 1994: 65). The National Forestation program and its supporting loans provided a dramatic boost to the DENR team's political resources and credibility. NFP

²¹ According to a senior DENR official who participated in the initial negotiations with the ADB, the ADB was more interested in funding new investments in sawmills, rather than smallholder plantations whose trees might never reach the export market (PC5 1995). An ADB official who participated in the negotiations could not confirm this account of the ADB's initial preferences, but did acknowledge that the DENR team had presented the idea of a national reforestation program using contracts with households and community groups. He also pointed out that the loan also allowed commercial firms to make reforestation contracts (PC16 1996).

provided not only a creative way to meet equity and environmental objectives in the forest sector, but also a source of political patronage that could be used to buy off opposition to sectoral reforms, and desperately needed foreign exchange for the national government.

As implemented, the NFP was far more successful in meeting equity goals than environmental goals, and it was grossly inefficient in economic terms. Due to poor contract design, monitoring and enforcement by DENR, a large proportion of all trees planted under the NFP did not survive (Korten 1994; PC9 1996; PC11 1995; UNAC 1992b).²² Nevertheless, the loan did pump over \$100 million into the uplands at a time when rural poverty had reached a postwar high, and it gave DENR reformers resources to blunt opposition and build a constituency among NGOs and rural residents for its operations.

Pruning the Logging Industry, 1987-89: During the middle years of the Aquino term, Factoran and his DENR team dominated the policy making process at the sectoral level. Along with specific equity-, environment- and efficiency-oriented reforms, DENR officials pursued an overarching strategy of reducing the number of active logging concessions and concessionaires. In part they achieved this aim by canceling concessions for violations of DENR regulations. Canceling a license was a risky proposition, however, because angry loggers often persuaded their Congressmen to put pressure on DENR's budget, programs and staff in order to win reinstatement (PC5 1996; PC12 1996).

Less risky was DENR's policy not of refusing to renew expiring Timber License Agreements (TLAs) (See Figure 5). Factoran, a lawyer by training, claimed that he was simply meeting the 1987 Constitution's requirement to eliminate administrative licenses and ensure that henceforth the government would allow only production-sharing and joint-venture contracts (PC5 1996). Slowly, the DENR developed an alternative contract, the Timber Production Sharing Agreement, that met the constitutional requirement. Meanwhile, a substantial number of prominent loggers found themselves without access to the forest; many exited the sector or moved into downstream processing (PC12 1996). From 1987 through 1991, the number of active TLAs declined from 137 to 69, and the area under TLAs declined from 5.4 to 2.6 million hectares (DENR 1995a: 33).

²² The program's design and implementation are reviewed in more detail in the next part of this dissertation.

The Community Forestry Program (CFP) originated in a series of discussions among DENR senior officials, consultants, academics, NGOs and aid agency staff who had worked on social forestry in degraded areas, and were interested in promoting community-based management of areas with both degraded and commercially valuable forests. As the area of expired and canceled concessions increased, the need for some alternative management system to avoid open access problems became very clear to senior DENR officials (PC4 1995).

While senior officials were committed to redistributing rights to forest resources, many lower-ranking DENR officials, academics and consultants whose expertise was in commercial forestry doubted that local residents could manage forests for long-term multiple use. Evidence from a World Bank pilot project that had authorized residents to harvest timber in a fire-damaged area suggested that poverty and greed could encourage collusion among residents, DENR staff and local timber dealers to harvest timber at unsustainable rates (PC5 1996; World Bank 1989: 74). There was also resistance from some commercial loggers, who saw CFP as a direct competitor to their own operations, and who also doubted that local residents had the technical expertise to manage forests (PC4 1995).

Despite resistance from foresters in DENR, academia and the logging industry, DENR senior officials succeeded in convincing the ADB and USAID to fund CFP as a pilot program at 50 sites. To meet some of the skeptics' concerns about local management capacity, and to create an articulate constituency for CFP, DENR officials decided to hire NGOs at each pilot site as organizers and intermediaries between community groups and DENR (PC8 1995). These NGOs would be selected regionally based on their community organizing and social forestry expertise, and contracted to provide organizing and technical assistance for three years at each CFP site. After the three year contract ended, the community organization (usually a cooperative) would assume full management responsibility and deal directly with DENR.

Unlike the National Forestation Program, CFP posed a potential threat to the interests of the commercial logging industry, and it also challenged the professional inclinations and expertise of the government's forest officers. Even the program's supporters acknowledged that there was no precedent for it. By introducing CFP as a foreign-funded pilot program, its advocates in DENR and the NGO community minimized political and bureaucratic resistance. As a pilot

program, CFP also gave its advocates an opportunity to learn from experience before expanding the program to the national level.

Although CFP's initiation as a pilot program did not provoke a major struggle, its implementation over the next several years showed that regional and local political elites would fight to block or coopt CFP participants at sites where forest resources still had substantial commercial value. It also showed that even when local elites did not actively undermine the program, struggles among community members over the use of forest resources and external funds could undermine the program's goals. These issues are discussed further in the next part of this dissertation.

Tackling Commercial Logging Head-on, 1990-91: The high point of reforms targeted at commercial logging came in 1990-91, when reformers in DENR raised forest charges by a factor of ten, banned logging in the remaining old growth forests, and significantly reduced the annual allowable cut in the remaining concessions. These reform proposals were developed by DENR officials and allies in USAID to achieve by a combination of sectoral efficiency, environmental and equity goals, but their timing and their successful initiation owed a great deal to circumstances at the national level.

National circumstances, in the form of a renewed fiscal crisis, gave reformers a justification for raising logging fees and weakened potential opposition in Congress. At the sectoral level, the conditional promise of a \$100 million grant from USAID strengthened the reformers' case for the tax increase. An increasingly militant anti-logging campaign by NGOs helped DENR present its proposal to ban logging in the old growth forests and reduce the allowable cut as a wise balance between the extreme positions of the loggers and the NGOs. Finally, the logging industry itself appeared to have reached a tipping point. The lead industry association, the PWPA, was able to muster just enough support to stop the passage of a logging ban by the Congress, but it could not prevent the passage of legislation ratifying DENR's increase in logging fees, and it also accepted the ban on logging in old growth forests. After 1991, individual logging firms adopted a *saue qui peut* strategy of seeking exceptions from DENR rules rather than trying to revive the industry's collective bargaining power.

After the attempted coup by Colonel Gregory Honasan and members of his Reform the Armed Forces movement in December 1989, the Philippines' shaky economic recovery slowed

dramatically. The first months of 1990 saw capital flight and a paucity of new investment, threatening the government's ability to meet its debt service obligations. A major earthquake in July delivered another blow, and the rise in oil import costs after the Iraqi invasion of Kuwait in September gave the coup de grace to the Aquino administration's budget and medium term development strategy. In response, the government undertook a new round of negotiations with the IMF and committed to a new round of budget cuts and tax increases (World Bank 1991a: 2-4).

Advocates in the DENR and their allies in USAID took advantage of renewed national fiscal crisis and the declining influence of commercial loggers at the national level to increase logging charges by a very large amount. Earlier, in 1988, the DENR had attempted to impose a reforestation deposit on loggers, but its efforts had been blunted by opposition from the PWPA, which captured control of the reforestation fund (Bautista 1992:21-22).

In 1990, DENR officials reached agreement with USAID on a \$100 million grant for forest management reforms.²³ Phased but steep increases in forest charges were one condition of the grant.²⁴ Going far beyond the USAID requirement, DENR enacted an "environmental fee" in June 1990 (Department Administrative Order (DAO) 62, series of 1990) which raised forest charges from 35 Philippine pesos (roughly \$1.40) per cubic meter to P535 (roughly \$21.50) per cubic meter of hardwood harvested. As a result, the government's share of the sale price of logs rose from an average of less than 10 percent to roughly 25 percent; the government's share of forest rents (the difference between sale price and all production and marketing costs) rose by even more (Bautista 1995: 3-9).

The DENR argued that the environmental fee was still significantly less than the total externality cost of logging in old growth forests (based on environmental economic analysis of the costs of soil erosion and damage to residual trees), and that loggers would still retain 15-40% of the resource rent, depending on market prices (DENR 1990b). Nevertheless, the fee provoked an

²³ The total grant amount was \$125 million, but \$25 million was used to endow the Foundation for the Philippine Environment, a non-government organization, and \$20 million was allocated for consultant services, monitoring and evaluation. The remaining \$75 million was to be disbursed to the government in tranches, conditional on the initiation of forest sector policy reforms (USAID 1990: Annex 1, Attachment 2).

²⁴ Specifically, USAID required the DENR to raise forest charges 20% above their 1989 level prior to the release of the first tranche of \$15 million in December 1990. To receive additional funds in subsequent years, DENR had to show that it had actually collected 300% more revenue in 1990 than in 1989, and 500% more revenue in 1991 and 1992 than in 1989 (USAID 1990: Annex 1, Attachment 1).

outraged response from the logging industry. The PWPA lobbied Congress and filed suit to prevent its collection, claiming that it constituted a tax, thus usurping the Congress' exclusive power to levy taxes (Vitug 1993: 58-59).

To counter industry lobbying, DENR used not only the externality argument, but also the argument that any attempt to roll back the fee would jeopardize the \$100 million USAID grant at a moment when the government desperately needed foreign exchange. DENR officials convinced the Office of the President to support legislation that would make the constitutional case against the environmental fee moot. The upshot was a bargaining process in the House and Senate Natural Resource committees, leading to a 1991 law (Republic Act 7161) that set the forest charge at 25% of the FOB price of logs (Vitug 1993: 59-60).²⁵

During 1990, DENR officials and their USAID counterparts had also reached agreement on another condition of the USAID grant: a ban on logging in all old growth forests, and in all areas above 1000 meters elevation and 50% slope. Since the old growth forests were by far the most valuable areas inside existing concessions, with several times more harvestable timber per hectare than logged-over forests, the DENR's proposed regulation would substantially reduce the profitability of commercial logging. DENR officials knew that this proposal would arouse opposition from the logging industry. Under the auspices of a forestry "master planning" process, they had been discussing a variety of options for future regulation of commercial logging with both industry representatives and NGOs. They also knew that a joint Congressional-NGO campaign to ban commercial logging was gathering steam, and they believed that their proposal would emerge as a reasonable compromise between the status quo and a total commercial logging ban (PC13 1996; DENR 1990a: Ch.4).²⁶

In the Congress, the well-respected senators Orlando Mercado and Aquilino Pimentel had introduced bills to ban commercial logging in every session since 1988, but their efforts had not received serious attention until they joined forces with a nascent NGO coalition. This coalition, the Task Force Total Commercial Log Ban, involved over forty environmental- and

²⁵ Though the industry was able to finagle a revision to the FOB price calculation methodology that somewhat reduced its costs, the net impact was still a significant jump in rent capture (cf. Bautista 1992: 51-53).

²⁶ DENR's opposition to a total logging ban was not merely tactical. Most senior DENR officials did not support the proposal for a total ban on commercial logging. They agreed with the PWPA that the Department lacked the capacity to enforce a ban, and that a ban would greatly increase the cost of the country's wood supply, thus creating strong incentives for illegal logging (PC5 1996).

equity-oriented NGOs loosely coordinated by the Haribon Foundation (Miller 1994: 8-9). In 1991, legislators, NGOs and the DENR again targeted the commercial forestry subsector for reforms. Though the House Committee on Natural Resources retained close ties to the logging industry, its counterpart committee in the Senate was dominated by liberals with broader national constituencies. Mercado in particular saw the anti-logging campaign as an opportunity to gain support from urban middle class voters in the run-up to the 1992 elections (Vitug 1993: 71-73).

Under attack in both Congress and DENR, with public opinion increasingly concerned about the environment, and with a dwindling base of members and financial resources, the PWWA chose not to fight the DENR's proposed ban on logging in the old growth forests. Instead, it concentrated on defeating the proposed logging ban legislation. It provided testimony by academic experts and consultants, who warned that a logging ban would probably accelerate deforestation because DENR lacked the capacity to enforce it, and that the country's wood import bill would skyrocket. It also paid for advertisements warning that many jobs would be lost if the ban passed (Vitug 1993: 81-83).

DENR officials turned out to be right about the fate of the total ban bill. Though the Senators who introduced the bill were able to pass a Senate version in September 1991 that banned commercial logging for 30 years, they and their allies in the NGO Task Force were not able to muster enough votes to pass it in the House. Instead, the House passed a "selective" ban which would have prohibited logging in some highly deforested areas. The House "ban" would have little impact on the remaining commercial concessions, which were located in the relatively well-forested areas of northern Luzon, northern Mindanao and Palawan. The bills died in a House-Senate conference committee before the 1992 elections (Vitug 1993: Chapter 4).

After passing the ban on logging in old growth forests, the DENR passed additional, complementary regulations protecting logged over forests. The regulations reduced the annual allowable cut for concessions operating in logged-over forest areas, and raised the minimum amount of standing timber that had to be present in a concession area before it could be cut. The reduction was dramatic: from 1991 to 1992, the average annual allowable cut dropped from 1.75 cubic meters per hectare to 0.75 cubic meters per hectare--a restriction of more than 50 percent (calculated from DENR 1995a: 33).²⁷ Under the combined impact of the old growth ban and the

²⁷ These figures were derived by dividing the total volume harvested in each year by the total area under

restrictions on logging in residual forests, reported log production fell nearly 50 percent, suggesting that enforcement was fairly tight (calculated from DENR 1995a: 61).

The higher logging fees imposed in 1991 probably would not have passed the Congress were it not for the national fiscal crisis and the additional balance of payments support offered by the USAID grant. Without the national crisis, DENR might not even have been able to uphold the higher fees as administrative regulations.

On the other hand, DENR probably did not need the national fiscal crisis to succeed in banning commercial logging in old growth forests and restricting cutting in residual forests. Even though these measures had the potential to cut into logging industry profits far more deeply than the increase in logging charges, DENR's legal authority to pass them was much clearer than its authority to increase the charges. Some in the logging industry may have accepted the DENR's reasoning that accepting a ban on logging in old growth forests was a good way to undercut the Senate-NGO campaign for a total ban on logging. Some loggers may also have calculated that the old growth ban would be difficult for DENR to enforce, because old growth areas were scattered within residual forests in most logging concessions.

In any case, the reformers' success in increasing charges, imposing the old growth ban and restricting cutting in residual forests showed that the commercial logging industry's political influence had greatly declined by the end of the Aquino administration. After 1991, the industry ceased to attract significant new capital or investment, and its political influence in the Congress ebbed so low that DENR, rather than the PWWA, became the main public opponent of a commercial logging ban. In contrast, DENR senior officials and their allies in domestic NGOs and international aid agencies had succeeded in building a broad if fractious coalition in favor of much tighter economic and environmental regulation of the logging industry.

Though they were dramatic improvements on the status quo, these reforms have not been easy to implement. It is clear that the government has gained revenue, eliminated some inefficient producers, and has protected some areas of old growth forests from commercial logging. Forest charge collection quadrupled in 1990, then doubled again in 1991, though they

Timber License Agreement in that year. In 1991, DENR prohibited TLA holders from logging in residual forest areas containing less than 67 cubic meters per hectare of mature timber; the previous minimum had been roughly 120 cubic meters per hectare (Vitug 1993: 60). The new regulations put quite a large area of residual forest inside TLAs off-limits for further logging, and thereby reduced the annual allowable cut.

have since fallen off to near the 1990 level (DENR 1995a: 199). Evasion of forest charges and the logging ban remain serious problems for DENR. Moreover, the higher charges, the ban and the reduction in allowable cut have accelerated disinvestment from the logging and wood processing industries. The area covered by timber licenses fell by nearly 50 percent from 1989 to 1992.²⁸ The number of active sawmills, which had declined by about one-fifth over the past decade, fell more than a third (from 152 to 95) from 1990 to 1993 (calculated from DENR 1995a: 47). The Philippines may have improved overall social welfare by dramatically reducing the scale of its domestic commercial logging industry, but the process has certainly caused substantial economic disruption along the way.

Creating the National Integrated Protected Areas System, 1991-92: The Factoran team's final major reform initiative, in the latter part of 1991 and the first half of 1992, was to develop a "national integrated protected areas system" (NIPAS). The NIPAS was to include a representative sample of the Philippines' diverse forest, coastal and marine ecosystems, as well as areas with high concentrations of rare endemic species and areas of natural beauty. It was to be supported financially by a grant from the Global Environment Facility (GEF). The World Bank was the lead agency for the Philippine NIPAS project. In consultation with senior DENR officials, it made the \$20 million GEF grant conditional on the passage of legislation establishing the NIPAS by June 1992 (World Bank 1991a: 21, 22, 33).

When it drafted the NIPAS legislation late in 1991, DENR officials made it clear that commercial resource exploitation was not permitted in any NIPAS area. They also added an unusual provision: all of the country's old growth forests, regardless of their location, were to be part of the NIPAS. In other words, DENR aimed to gain legislative sanction for the old growth ban it had passed by regulation earlier in 1991 (PC3 1995).

In contrast to the battle over logging charges, the NIPAS legislation did not spark a confrontation in the Congress. There were three main reasons for its relatively easy passage. First, the logging industry had been badly bruised in its battles with the reform coalition in 1991, and the outcome had made it clear to many members of Congress that the industry's fortunes were on the wane. Second, a catastrophic flash flood in Leyte in November 1991 had killed over 500

²⁸ The total area under TLAs declined from 4.3 million hectares to 2.3 million hectares, compared to a decline of 25 percent during the period 1986-89 (calculated from DENR 1995a: 33).

people, and the flood had been blamed on illegal logging. Public anger at the logging industry grew thereafter, reducing Congressional support for the industry during the first half of 1992. Third and related, the run-up to the May 1992 election campaign featured environmental issues to a far greater degree than any previous campaign, and few members of Congress wanted to risk being labeled "anti-environment" by opposing the generally innocuous NIPAS Act (PC14 1996).

In fact, indigenous peoples were the most outspoken constituency when DENR presented the draft NIPAS legislation in public consultations. Their representatives raised a number of questions about their rights to ancestral lands that were designated as part of NIPAS areas. In response to their concerns, the draft legislation was significantly modified to guarantee that there would be no forced resettlement of indigenous people, and to give their representatives standing on management bodies for NIPAS parks and sanctuaries (de Guzman 1993: 57-60).

When it came time for Congress to vote on the NIPAS legislation, the biggest problem was moving the proposal high enough on the crowded Congressional agenda for a vote. The World Bank's June 1992 deadline for the legislation proved very helpful to DENR's legislative team; the prospect of losing a \$20 million grant led the Congress to pass the law in May 1992 virtually without debate (PC14 1996).

From 1987 through 1992, advocates in DENR, NGOs and international aid agencies proposed a number of reforms aimed at redistributing the benefits of forest exploitation from commercial firms to rural residents and to the Philippine government. The reformers also sought to combine equity-enhancing rural employment with environmental protection through the National Forestation Program, and to ensure protection of the Philippines' remaining old-growth forests through the National Integrated Protected Areas System.

I have argued that their remarkable degree of success in initiating these reforms is due to a combination of national political circumstances that opened windows of opportunity at several points during the Aquino administration, the declining rents available to the logging industry and the consequent decline in the industry's political influence, and the development of a broad-based sectoral reform coalition led by senior officials at DENR and their allies in domestic NGOs and international aid agencies.

At a broad level of analysis, it may be fair to say that the decline of the commercial logging industry was inevitable as the country's commercially valuable forest disappeared. That trend cannot, however, explain the equity-oriented framing of reforms in the Philippines. As the Asian Development Bank initially advocated in the Philippines and as the case of Thailand will show, it would have been possible to promote commercial reforestation rather than community-based reforestation and management of standing forests. Both the Aquino administration's focus on equity at the national level and the predispositions of the DENR reform team and its allies help explain why the Philippines' reforms emphasized redistribution of forest management rights. Further, the logging industry's decline might have taken quite a bit longer if committed reformers had not been appointed to senior positions at DENR (Minister Maceda's actions show how the DENR might have been run during Aquino's term). Secretary Factoran and his team deserve a great deal of credit for gauging the level of sectoral support and opposition for their proposals, building the reform coalition, and taking advantages of national windows of opportunity when they opened.

C. Forest policy under Ramos and Alcala, 1992-1995: consolidation and backsliding

Factoran and company would have been a hard act to follow for any subsequent DENR leadership team, but national circumstances and sectoral leadership both became less favorable to reform during the Ramos administration.

In the analytic framework of this thesis, the first two years of President Ramos' term saw a national political realignment in favor of economic efficiency and traditional growth goals, away from the equity goals that had dominated public discourse during the Aquino term. The government's commitment to a new "social reform agenda" in late 1994 represented a modest national realignment toward equity goals, at least with regard to particular disadvantaged groups.

These national changes did not, however, have as strong an impact on the initiation of reforms in the forest sector as the change in leadership at DENR. Secretary Angel Alcala, though well-reputed as a marine biologist and environmentalist, failed to maintain DENR's commitment to reform in the forestry sector. Worse, he damaged DENR's political credibility by allowing the return of logging patronage at high levels in the DENR.

As a result of changes in the goals of national political leaders and declining revenues, the forestry sector became a lower national priority than it had been during the Aquino administration. Sectoral reformers consequently had fewer opportunities to win national support for their initiatives. Even more problematic were the changes at the sectoral level. Weak leadership within DENR and the resurgence of traditional patronage politics, combined with the shift in national priorities, led to a reform record that was pale in comparison to the preceding administration's.

1. The national context for reforms during the Ramos administration

Fidel Ramos was elected to the Presidency in May 1992 by a plurality of 24 percent. Despite his position as head of the Philippine Constabulary under Marcos, he had been able to convince Aquino and a substantial portion of the middle class of his commitment to democracy by beating back military coup attempts and taking some action to prevent human rights violations during counterinsurgency operations (Thompson 1996: 194-96).

As President, he sought to widen his electoral base and strengthen the economy by pursuing an aggressive program of export-led industrialization. His "Philippines 2000" development strategy aimed to raise per capita income to \$2000 by the year 2000, while ensuring equitable distribution of the benefits of growth. To accomplish this ambitious development goal, Ramos liberalized investment rules, particularly for infrastructure (power plants, telecommunications and roads) and sought to increase competition in the energy and finance sectors and in export industries (NEDA 1992).

Focusing on efficiency and economic growth, the Ramos government initially downplayed equity and environmental goals. By 1994, however, the President faced criticism for his growth strategy's failure to improve living standards for non-industrial workers and households. In response, he proposed a Social Reform Agenda (SRA), which identified nine top priority equity-related issues for action during the remainder of his term (ROP 1994).

The natural resource sectors were not at the center of Ramos' economic development strategy. In the framework of Philippines 2000, natural resources were once again to be used as engines of growth, through domestic and foreign investment in value-added resource exploitation. Philippines 2000 did not, however, have a dramatic effect on the forest sector. The sector's

commercial decline and the political risk of a ban on commercial logging made it less attractive for investors than the mining and energy sectors, where a large number of joint venture agreements were signed in the first three years of the Ramos term.

Forests received more attention in the context of the Social Reform Agenda. The SRA made recognition of the claims of indigenous people and support for their forest management efforts one of nine "flagship programs."

2. DENR leadership and sectoral politics

Within the forest sector, the most important change was the appointment of Angel Alcala, a marine biologist who had headed a university in the Visayas, to succeed Fulgencio Factoran as Secretary of the DENR. Alcala began his term with a strong endorsement from environmental NGOs. The NGOs had attacked Ramos' first choice for the post, a Congressman and former logger, as a past beneficiary of the forest sector patronage system. In contrast, they praised Alcala for his clean record of public service, his advocacy of coastal and marine conservation, and his technical understanding of ecosystem management problems (Vitug 1993: 173-76).

Alcala's appointment did not engender quite as much support from equity-oriented NGOs, however, because his commitment to equity goals was less clear than his commitment to environmental protection. International aid agencies were also lukewarm, since Alcala did not appear to have a strong interest in improving economic efficiency in resource management. His skills as a public agency manager were also open to question, though his previous experience as a university president might have given him some preparation (PC11 1995).

As he sought to consolidate the forest sector reforms initiated by his predecessor and to make his own mark by reforming urban pollution and coastal management policies, it became clear that Alcala was an ineffective environmental advocate and a poor agency manager. The forest sector, still controversial despite its shrinking economic impact, proved his undoing. In 1995, a series of reports by an investigative journalist revealed that Alcala's closest subordinates were manipulating a much-publicized, World Bank-funded plan to crack down on illegal logging. The subordinates, including Alcala's daughter, appear to have been involved in schemes to extort money from loggers and re-sell confiscated logs (Severino 1995). Alcala began to shift DENR's focus away from the forest sector, and missed opportunities to consolidate reforms initiated by his

predecessor. One clear manifestation of Alcala's priorities was his agreement with USAID to redirect roughly \$20 million in undisbursed USAID grant funds from forest policy consulting services to the initiation of a coastal zone management program. (Alcala 1994; Johnson 1994). Within the sector, Alcala's failure to contain logging-related corruption seriously undermined DENR's credibility as an advocate of forest sector reform, and made it difficult for DENR to secure Congressional ratification of the reforms it had undertaken through administrative regulations. Alcala was replaced in July 1995 by Victor Ramos, who had served as Factoran's undersecretary for field operations and as President Fidel Ramos' special assistant for energy and environmental affairs.

From this interaction of national and sectoral factors, what emerges most clearly is a reduction in the commitment of both national leaders and DENR senior officials to forest sector reforms, with the partial exception of efficiency-oriented reforms that could encourage renewed investment in the sector, and equity-oriented reforms that became Presidential priorities through the SRA.

3. Reform proposals and their fate

The Forestry Code: Arguably the single most important initiative in the sector during the first four years of the Ramos administration was the preparation of a draft Forestry Code to replace the Marcos-era Forestry Reform Code. The draft prepared by DENR and presented to the House and Senate Natural Resources Committees (S. 830 1992, HB. 8931 1992) sought to give legislative force to many of the reforms made by administrative order during the previous administration. In particular, it made community-based forest management the primary goal of forest policy, but also allowed for continued commercial logging and commercial reforestation following the stricter guidelines established during the past several years.

Despite several attempts by DENR to gain Congressional ratification of the draft Code, neither House brought it to a vote. There were three major obstacles to passage of the Code. First, as the economic contribution and political visibility of the forest sector declined, forest sector issues lost out in competition with other, more pressing legislative issues. Second, passing the forest code would have ratified DENR's controversial policy allowing commercial logging to

continue in well-stocked residual forest areas. Ironically, supporters of the total ban on commercial logging succeeded in portraying supporters of the proposed Code as creatures of the logging industry, despite the fact that the code would give permanence to the reforms that have almost eliminated the industry's political influence (DAI 1995a). Third, media and Congressional scrutiny of corruption in DENR under Alcala reduced the agency's credibility as an advocate for moderate reforms not only among politicians, but also among DENR's previous allies--particularly aid agencies and activist NGOs (DAI 1995b). Thus the declining national salience of forest sector issues, the continuing controversy over the log ban among sectoral actors, and doubts about the credibility of senior officials in the DENR gave national legislators few incentives to address remaining forest sector issues.

Increasing Efficiency in the Logging Sector: Within the DENR, Alcala's subordinates in the Forest Management Bureau made several attempts at regulatory reform in the commercial forestry subsector. These attempts, building on initiatives begun under Factoran, were designed to encourage plantation forestry and introduce competitive bidding for logging concessions. The basic strategy, developed by DENR officials, consultants and ADB staff in the late 1980s, was to link plantation forestry to natural forest logging through a revised logging concession agreement, called the Industrial Forest Management Agreement (IFMA). IFMA areas could be completely deforested, or they could include both well-stocked natural forest and deforested areas.

The regulations issued under Factoran in 1991 (DAO 42, s.1991) required IFMA holders whose areas included both well-stocked and deforested lands to reforest all of the deforested area before they could harvest any natural forest trees. The idea of including both deforested and well-stocked area in the boundaries of each IFMA had arisen because previous efforts to promote plantation forestry in completely deforested areas (by offering the land for a nominal fee, and offering tax deductions for plantation investments and tax holidays for sales) had not generated any substantial private investments.

To ensure that IFMA holders met their reforestation requirements before cutting natural forest, DAO 42 required applicants for IFMA areas that included well-stocked forest to offer a performance bond with a floor price of at least 10% of the value of the standing timber or P6000 per hectare, whichever was greater. IFMAs including well-stocked forest were to be awarded to

the applicant who offered the highest value performance bond. DENR could revoke the IFMA and collect the bond if the IFMA holder violated any of the major terms of the agreement.

Unfortunately, even with the addition of well-stocked forest to IFMA areas, the incentives DENR offered were not enough to stimulate additional investments in plantation forestry. The free land and tax incentives were not sufficient to compensate for the relatively high cost of capital, the 8-12 year minimum period before the first harvest of fast-growing trees, and the uncertainty about future market demand and prices. Moreover, some requirements of DAO 42 were actually disincentives to investment. One problem was that all of the awarded area had to be planted within five years of the IFMA award. This timeline was too fast for an 8-12 year harvest cycle. It meant that investors would have to pay the planting costs and then wait 2-5 years after the last planting for the first harvest, instead of planting on an eight-to-12 year timeline and getting the first harvest immediately after the last area was planted. The second major disincentive was the requirement that reforestation take the form of enrichment planting in degraded forests, rather than allowing clear-cutting and replanting. Enrichment planting requires greater management planning, skilled labor and maintenance effort than planting an open area (Bender 1992).

Under Alcala, the DENR changed the IFMA regulations three times. First, in 1993, DENR issued an amendment to IFMA (DAO 60, s.1993) that allowed IFMA holders to harvest well-stocked forest immediately; IFMA holders were still required to replant deforested areas, but they were given twelve years to complete the reforestation process. DAO 60 also reduced the floor price of the performance bond below 10% of the value of standing timber in areas of moderately stocked forest. For many IFMA holders, this amendment created an incentive to cut as much natural forest as possible in the first few years of the IFMA, then forfeit their performance bonds. On the other hand, the performance bond still represented a fairly large sum relative to the value of standing forest, and the legal costs of defending one's assets against lawsuits by the bond issuing company could be substantial. Once DENR created the possibility of cut-and-run harvesting in IFMA areas, well-connected loggers began to apply pressure informally through Alcala's closest subordinates for a reduction in the value of the performance bond. Three months after the issuance of DAO 60, DENR again amended the IFMA regulations. Under DAO 68, s.1993, the performance bond floor price was reduced from 10% of the value of standing

timber to P20 per hectare. For a forest area well-stocked with moderately valuable hardwood (standing volume of 80 cubic meters per hectare, value P2000 per cubic meter), DAO 60 would have set a floor price for the performance bond of P16,000 per hectare; DAO 68 set the price at P20 per hectare (La Vina 1994).

DAO 68 raised serious questions about DENR's commitment to its commercial forestry reforms. It created very strong incentives for IFMA holders to cut and run, leaving DENR with a bond of trivial value. International aid agency staff expressed concern to Alcala and other senior officials. Environmental NGOs and the media attacked DENR loudly and publicly. In April 1994, four months after DAO 68, Alcala again amended the IFMA regulations (in DAO 15, s.1994) to restore the floor price requirements of DAO 60. The IFMA episode undermined DENR's credibility with the media, environmental NGOs and international aid agencies. It made it substantially more difficult for reformers inside DENR to gain support for new reform initiatives. For the first time since 1986, the locus of initiative shifted from DENR to national policy making fora.

Recognizing Indigenous Peoples' Land Claims: The one major equity reform during Alcala's tenure was the formal registration of indigenous peoples' claims to public forest lands. This initiative was the end result of a long and historically unsuccessful campaign by indigenous people's representatives and their advocates to gain recognition of their prior rights to land claimed by the Spanish and American colonial regimes and by the Philippine government (de Guzman 1993; Gatamayan 1992).

When Factoran became Secretary of DENR, he established an Indigenous Cultural Affairs Division (ICAD) to deal with indigenous peoples (officially called "indigenous cultural communities," or ICCs), and appointed an activist lawyer who had presented ICC claims as the head of the unit. With funding from USAID, ICAD staff and consultants began drafting regulations in 1991, and established procedures for individual households to register land claims in 1992. Regulatory drafting on procedures for whole communities to claim large tracts of "ancestral domain" had not been completed when Factoran left office (PC6 1996).

As suggested above, the change in national development strategy and DENR leadership in 1992 muted DENR's equity orientation. The SRA restored equity issues to the national agenda at

the end of 1994, but as in 1986, the primary force for translating national equity goals into a sectoral action program came from outside DENR.

Early in 1993 Alcala issued the ancestral domain regulations (DAO 2, s. 1993) that Factoran's team had begun, but he did not put the weight of the department behind them until the end of 1994, when President Ramos singled out indigenous people's claims for government action in the Social Reform Agenda. Prior to the SRA, the provincial committees established to hear ICC claims moved with glacial slowness, due primarily to lack of staff interest and motivation, rather than strong opposition to ICC claims.

After the SRA was proclaimed, the ICAD staff in DENR headquarters took advantage of sustained Presidential attention to the plight of ICCs to goad their provincial counterparts into action. President Ramos frequently asked DENR to schedule the issuance of "Certificates of Ancestral Domain Claim" (CADCs) during his provincial tours, so that he could award them personally. ICAD staff used the scheduling of Presidential visits to pressure provincial offices to process outstanding claims. From January 1993 to December 1994, DENR issued 2 CADCs covering 110,000 hectares. From January 1995 through March 1996, DENR issued 30 CADCs covering 610,000 hectares (DENR 1996b; PC2 1996).

No major environmental reforms: Finally, despite Alcala's strong commitment to environmental issues, there were no major new environmental reforms in the forest sector during his tenure. Nor did the DENR substantially increase the resources allocated to forest protection or to the National Integrated Protected Areas System; the system continued to depend almost entirely on international aid agency funding (PAWB 1996: 58-65).

IV. Conclusion: reformers, opportunities, resources and strategies in the Philippines, 1980-1995

The recent history of forest policy reform in the Philippines shows how national circumstances interact with the resources and strategies of sectoral actors to affect the success of sectoral reform attempts. Under Marcos, status quo beneficiaries could still gain very large economic rents. They used their financial resources and political connections to dominate the policy making process, blocking reform efforts even during periods of economic and political crisis. In contrast,

advocates for efficiency, equity and environmental reforms were weakly organized and not well-represented in policy making institutions. When Teodoro Pena tried to use his formal authority as Minister of Natural Resources to increase the government's revenue from logging and crack down on inefficient and corrupt logging practices, he was undermined by informal patronage networks connecting the Minister's nominal subordinates with Marcos and his cronies.

Only initiatives that did not directly challenge the interests of status quo beneficiaries had any chance of succeeding. The most notable of these reforms was the Integrated Social Forestry Program, which covered deforested areas. Nevertheless, when senior officials in the Ministry saw the opportunity to link ISFP to the national KKK livelihood program, they expanded it in ways that were incompatible with its equity and environmental objectives.

Marcos' ouster temporarily disrupted patronage networks in the logging industry, and the economic and political crises of Aquino's first year created substantial opportunities for equity and efficiency reforms. In the forest sector, however, advocates for these goals remained weakly organized, and the major initiatives affecting the forest sector came from a cabinet-level working group on land reform.

In 1987, the election of a conservative Congress with ties to logging interests, the erosion of support for Aquino among the economic elite and the military, and the appointment of Fulgencio Factoran as Secretary of the reorganized Department of Environment and Natural Resources shifted the locus of reform initiatives from the national to the sectoral level. Lacking support from the national government, Factoran and his reform team sought alliances with equity and environment-oriented Philippine NGOs, and from international aid agencies interested in funding natural resource sector adjustment programs to promote efficiency and environmental protection.

Over the next five years, the loose alliance of DENR reformers, NGOs and aid agencies steadily weakened the influence of the logging industry and initiated a number of equity-, efficiency- and environment-oriented reforms. The success of these reforms owed a good deal to strategic use of changing national circumstances. The need for immediate action to address rural poverty helped win aid agency support for the National Forestation Program in 1987-88; the need to increase tax revenues during the renewed fiscal crisis of 1990 helped win Congressional passage of a law raising charges on logs, and the growth of environmental concern in the late

1980s and early 1990s helped undermine the logging industry's political influence and forestall opposition to DENR regulations restricting logging in old growth forests.

The election of Fidel Ramos in 1992 led to a national political realignment in favor of export-led growth and increased economic efficiency, arguably at the expense of equity and environmental goals. The national realignment led to increased pressure to exploit natural resources for economic goals, but the forestry sector, accounting for less than half a percent of GDP, was not as much affected by this national change as by Angel Alcala's appointment as Secretary at DENR.

Alcala's limited interest in the forestry sector, and his subordinates' perception that most politically feasible reforms in the forestry sector had already been initiated, led to a shift in DENR's priorities from initiating to consolidating forest sector reforms. With the exception of a rather unsuccessful attempt to initiate additional efficiency reforms in commercial forestry via the Industrial Forest Management Agreement, DENR attempted few new forest reforms during Alcala's tenure. Moreover, the DENR's reputation suffered from several scandals involving Alcala's subordinates, as well as localized instances of corruption and mismanagement.

With weak leadership at DENR, the locus of reform initiative shifted back to the national level. When the Ramos government decided that it could only sustain public support for its Philippines 2000 growth strategy by addressing some of the country's outstanding equity issues, DENR was directed to streamline and accelerate the process for registering indigenous peoples' claims to public lands, including forests. In this light, the dramatic expansion of DENR's CADC program is best understood as a response to changing national circumstances, not an autonomous DENR initiative.

In sum, the record of forest sector reform in the Philippines broadly confirms the propositions I have advanced on the initiation of reforms. Reform was very difficult when status quo beneficiaries could still profit greatly from commercial logging, even when reformers (e.g. Minister Pena) had nominal formal authority to initiate reforms. Reform became more feasible as the profitability of the industry declined, but it still took committed leadership at the key government regulatory agency and skillful alliance building to overcome the continuing influence of patron-client networks in the logging industry, Philippine Congress, local government, and DENR's own ranks.

When national circumstances became less favorable to reform, and sectoral advocates lost committed leaders in the DENR, the momentum for reform slowed and patron-client networks regained a hold on policy making and implementation. Only a national political initiative favoring equity for indigenous peoples restored DENR's commitment to recognize their claims to forest land. Whether DENR's commitment to indigenous peoples will outlast the Ramos administration's Social Reform Agenda remains to be seen. Still, the success of this initiative does suggest that advocates for a policy goal may be able to take advantage of national government initiatives even without strong sector-level leadership, if they have first institutionalized their representation at the sectoral level (in this case, through the Indigenous Affairs Division of DENR).

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Chapter 5

Initiating Forest Policy Reform: Thailand 1980-96

I. Introduction and summary of the argument

Comparing and contrasting Philippine and Thai reforms: There are strong parallels in the development of Thai and Philippine forest sector policies and institutions over the past fifty years. During the period of this study, however, the timing, process and outcome of Thai and Philippine forest policy reforms have differed in many respects. In the postwar era, both countries experienced timber booms from which foreign and domestic logging companies and their political patrons profited greatly. Both countries also experienced large-scale forest clearing for agriculture. Over time, deforestation from logging and extensive agriculture imposed significant and rising economic, environmental and social costs on a variety of social groups. These costs were usually diffuse, however, and those who bore the highest costs--indigenous peoples who lost traditional rights and migrant farmers who were denied secure tenure on land they had cleared--also faced repressive political structures. The combination of 1) high rents for status quo beneficiaries; 2) serious collective action problems for cost-bearers; and 3) repression of cost-bearers' protests meant that there were few organized demands for forest policy reform until deforestation was well-advanced in both countries.¹ By the early 1980s, however, the timber booms were ending and demands for sectoral reform by cost-bearers and their advocates were increasing. At the same time, both countries were also embarking on an ongoing process of economic and political liberalization at the national level, and both began to have organized environmental movements.

These broad trends led to a series of attempts to initiate forest policy reforms in both countries during the 1980s. The timing, content and success of reform proposals in the two countries have, however, differed in important ways. I will argue that these differences are largely

¹ There were warnings about deforestation's impacts from domestic and international forestry experts as early as the 1910s in both countries. By the mid-1960s most experts agreed that harvest rates exceeded regeneration rates in commercial timber concessions. Nevertheless, cost-bearers were not organized to gain access to expert recommendations--let alone translate these recommendations into political action-- until the 1980s. See Ross (1996a: 20-23) for a listing of warnings about deforestation in the Philippines, and Feeny (1988: 124-26) for Thailand.

due to differences in the timing and emphasis of national political realignments, in the links between national and sectoral policy-making institutions, and in the political resources of sectoral advocates for efficiency, environmental and equity goals.

The content of Philippine forest policy reforms has emphasized social equity more than any other macro-objective. A single national regime change, from Marcos to Aquino, strongly influenced both the timing and the content of reforms. Within the forest sector, an alliance of senior officials in the DENR, supportive international aid agencies and equity-oriented NGOs has effectively controlled sectoral policy making. Though the commercial logging industry mounted some strong challenges to reform at the national level, it failed to block reform, and no new status quo elite rose to challenge the reformers.

In contrast, the timing and content of reform in Thailand have been defined not by a single national regime change, but rather by an ongoing, often turbulent series of national political realignments. National political leaders have been more directly involved in policy change, and they have usually had greater influence than the national forest agency in the policy process. Reflecting the wide swings in national politics over the last decade, the goals of reform in Thailand have also varied much more over time, shifting from a strong emphasis on economic uses in the mid-1980s to an equally strong emphasis on environmental protection in the early 1990s, and shifting again in the mid-1990s toward equity goals. In short, the political opportunities and resources of Thai reform advocates, and consequently the chances for their reform proposals to succeed, have been much more closely tied to national political realignments than the fortunes of their Filipino counterparts.

The Thai reform process, 1980-95: Thai reforms began in the early 1980s with two intersecting trends: an economic downturn that led the government to promote export-oriented private investments, and political liberalization that allowed a greater degree of political activity by farmers, urban workers and public interest NGOs. In 1984-85, cabinet-level reformers under Prime Minister Prem saw opportunities to reshape forest sector policy to promote private investment, particularly in commercial reforestation. As the government and private sector collaborated on commercial reforestation, however, they encountered strong opposition from a coalition of farmers, environmentalists and journalists. The coalition's members took advantage of political liberalization to protest the reforestation program's equity and environmental impacts.

Because the government was unwilling to repress this dissent, commercial reforestation was largely blocked by the late 1980s.

In the late 1980s, political liberalization continued with a return to fully-elected civilian government. Though the cabinet of Prime Minister Chatichai was notably corrupt, its members were relatively more sensitive to public opinion than their partially elected predecessors. Urban-based environmentalists pushed on the government's sensitivity to allegations of corruption by organizing a media campaign that played up corruption in the logging industry and advocated a ban on commercial logging. Taking advantage of dramatic flash floods in late 1988, the leaders of this coalition framed commercial logging as the cause of the floods, and the use of logging concessions for political patronage as the underlying problem in the forest sector. The coalition also framed passage of the logging ban as a key test of the integrity new civilian leadership, and succeeded in pressuring the government into enacting the ban early in 1989.

The ban eliminated the commercial logging industry's influence on Thai politics, but it did not resolve ongoing conflicts among advocates of commercial reforestation, forest conservation and community forestry. The next major political shift, a military coup in 1991, favored advocates for forest conservation, but the policy chosen by the military government to promote conservation went well beyond the means that most sector-level actors had proposed. Under martial law, a peculiar alliance of army officers interested in exerting control of rural areas, conservation advocates in the RFD and commercial reforestation investors seeking large areas of open land initiated a forced resettlement program targeting residents in upper watershed areas. The program's aim was to force relocation of squatters from upper watersheds to lower, flatter areas, allowing the private sector to reforest the upper watersheds. Despite fierce community and NGO opposition to the coercive tactics of the army and the RFD, the military government continued with the relocation program until it was ousted by civilian protests in the spring of 1992.

Popular rejection of military rule and the election of a government with a strong base of farmer support late in 1992 created a major opportunity for equity advocates to achieve a redistribution of public forest land to smallholders. Unfortunately, Prime Minister Chuan's Democrat Party colleagues were more interested in using land redistribution as a source of political patronage than as a way to rationalize land use. Though large areas of forest land were

transferred to the national land reform agency, the actual distribution of land was largely controlled by national and provincial politicians and business interests.

Corruption in the land reform process led to the fall of the Chuan government. Its successor, another notably corrupt government under Prime Minister Banharn, faced a difficult situation in the forest sector. The land reform had left the RFD in charge of a significantly smaller land area, but most of the remaining area was in fact forested. Recognizing that the era of logging was over, and that the political and economic obstacles to commercial reforestation were substantial, the RFD was determined to re-invent itself as a forest protection agency, managing the country's increasingly valuable national parks system. RFD's push to reclassify most of the remaining forest as parks and sanctuaries sparked conflict between advocates for environmental protection, who largely supported RFD, and advocates for small farmers and tribal groups, who feared that RFD would seek to expel them from newly designated parks and sanctuaries. Prime Minister Banharn had promised to resolve this conflict in his election campaign, and his government did attempt to mediate negotiations among equity and environmental advocates on a community forestry law, but the government fell under the weight of its own corruption scandals before an agreement could be reached.

The Thai case suggests that favorable national circumstances do indeed provide windows of opportunity for sectoral reform. It is equally clear from the Thai case that favorable national circumstances do not guarantee sectoral advocates' influence over the content or the success of reform proposals. Institutional factors, particularly the degree to which policy making remains centralized in national government fora and the extent of sectoral actors' access to those fora, are important intervening variables that help explain the content and success of reform proposals. Finally, the Thai case also suggests that generalized political instability may offer more frustrations than opportunities for sectoral reformers. Though the advent of each new government created momentum for policy change, reforms initiated by one government were easily discontinued or even reversed by the next.

The following sections review the historical development of the Thai forest sector (section II) and the record of reform under several governments from 1980 to 1995 (section III). The conclusion (section IV) reviews the ways in which the Thai case advances and qualifies the reform initiation propositions.

II. Historical background

A. Forests under tribal, feudal and royal control

1. Tai settlement and forest clearing, 12th to 19th centuries

In Thailand, as in the Philippines, tropical forest covered much of the country until the early 20th century.² From the twelfth century onward, Tai-speaking people began to clear forests in the country's central river valleys for wet rice agriculture. Ethnically and religiously distinct "hill tribe" peoples occupied the forested, mountainous areas between the Tai and neighboring Burmese, Khmer and Laotian kingdoms (Girling 1981: Ch.1).

From the 15th to the 19th century the Tai developed a hereditary monarchy. The kings of Siam (as the Tai named their kingdom) gradually brought the feudal lords under the control of the Bangkok-based court and bureaucracy. For kings, nobility and commoners, labor was the most important base of wealth and power. Land was relatively abundant, and villagers frequently migrated to frontier areas to escape taxes and corvee labor obligations. As in the Philippines, migrants cleared forest for agriculture. In the process, they traded with, displaced and occasionally fought against forest- and hill-dwelling peoples (Girling 1981: Ch.2).

2. From feudal to royal control of forests: King Rama V's reforms

Unlike the Philippines, Siam never came under the direct rule of any colonial power. During the nineteenth century Britain conquered Burma to the west of Siam, and France conquered Indochina to the east, but the Siamese kings were able to play the colonial powers against each other and maintain a precarious independence. One element of the Siamese kings' strategy was granting trade and natural resource concessions to Britain and France in exchange for recognition of Siam's independence and neutrality. Among the most prized concessions were harvesting rights for Siam's northern teak forests. From the signing of the trade-opening Bowring Treaty in 1854 until 1896, British (and some French and Dutch) timber companies paid relatively small fees to the royal government in Bangkok, and larger fees to feudal lords of northern Siam who claimed ownership of the northern teak forests. In 1896, as part of a broader strategy for strengthening

² A European forester estimated in 1913 that forests covered roughly 38 million hectares of Thailand's 51 million hectare land area, but there are no reliable estimates before the 1950s (Hirsch 1993: 25).

Bangkok's control over the north, King Rama V declared royal ownership of all of the kingdom's forests. To compensate the northern lords, he assumed many of their debts (Pragtong and Thomas 1990: 168-69).

By the same royal act of 1896, Rama V established a Royal Forest Department within the agency that later became the Ministry of Agriculture. Like the Philippine Bureau of Forestry, the Royal Forest Department (RFD) was supposed to regulate commercial forest concessions to ensure sustainable yield harvesting and adequate reforestation. In practice, producing revenues for the central government via stumpage charges and fees was the RFD's top priority; environmental goals were secondary. Though the RFD was supposed to ensure that stocks of teak and other high-value hardwoods were maintained, it did little to enforce restrictions on logging or to verify reforestation by concessionaires (Chayapechara 1993: 151).

The sale of forest harvesting rights to foreign and domestic commercial firms also created serious social equity problems in the north. Hill tribes living in and around forest concession areas were forcibly denied access to timber and non-timber forest resources. Their claims of prior rights to the forest were not recognized by provincial nobles or by the royal government. The state generally viewed them as "backward" peoples who were to be ignored, assimilated or expelled, depending on their behavior and the interests of the monarchy (Rerkasem and Rerkasem 1994: 4).

B. Forests in the constitutional era, 1932-present

1. Military modernization, forest clearing and forest industries, 1932-60

During the early 20th century, a new struggle between modernizing and traditional elites eclipsed the old struggle between king and nobles. Thailand's formal political structure changed significantly in 1932, when a cadre of young, Western-educated military men and civil servants staged a bloodless "revolution." This elite group changed the country's name to Thailand, and wrote a modern constitution that bound the king to respect the decisions of a partly elected, partly appointed parliament. Mass-based political parties did not develop, however, and politics was completely dominated by the Bangkok-based, modernizing elite of government civil servants and military men. The ambitious young general Phibun, one of the leaders of the 1932 coup, quickly

re-centralized power in his own hands and established a quasi-dictatorship that lasted through the Second World War (Samudavanija 1989: 306-310).³

Thailand's liberal democratic modernizers, led by Pridi, opposed Phibun and his collaboration with the Japanese. Pridi won power in an election following the ouster of Phibun in the chaotic postwar year 1946, but Phibun and his key subordinates army general Sarit and police general Phao ousted the Pridi government in a coup the following year (Girling 1981: 100-108).

With the exception of a turbulent period of democratic government in the years 1973-76, Thailand was governed for the next forty years by a succession of military men. The leaders were usually army generals sitting atop unstable coalitions of fellow officers and senior civil servants. Though a parliamentary, bicameral form of government was maintained across nine constitutions, the vast majority of senators and representatives were appointed by military commanders who also served as prime ministers (Samudavanija 1989: 320-23). Military leaders justified and sustained their rule by identifying themselves as defenders of the monarchy, the Buddhist clergy and the idea of Thai nationhood, by invoking the threat of Communist insurgencies on Thailand's eastern and northern borders, and by promoting rapid economic growth.⁴

Under the direction of Field Marshall Sarit in the late 1950s, Thailand's government began to take an activist role toward economic development, making major investments in infrastructure and encouraging the growth of export-oriented agriculture and industry. As part of this national strategy, the Thai government promoted the development of forest sector industries. In the late 1940s, the RFD created a national Forest Industry Organization (FIO) to manage logging operations. During the mid-1950s, FIO became an independent parastatal company, taking over concessions from foreign firms. In the mid-1960s, the FIO removed itself from direct management of logging operations by establishing provincial logging corporations. These logging

³ Thais generally refer to each other by their first names; Phibun's full name was Phibun Songkhram.

⁴ Samudavanija (1989: 337-8) suggests several additional factors that led most Thais to accept a semi-democratic "bureaucratic polity" through the 1980s. Repression of opposition figures has been mild and selective (with the exception of counterinsurgency operations in 1976-79). A relatively free press has provided outlets for public opinion, and an independent judiciary has constrained arbitrary use of power by political and military leaders. Socially, the military and civil service have provided careers open to talent, with little discrimination on ethnic or class lines. Ethnic and class cleavages remain limited, elite attitudes remain anti-democratic (support for democracy is negatively correlated with education in poll data), and politicians are not respected. Finally, under King Bhumibol the monarchy has become increasingly important as an institution legitimizing a conservative semi-democratic state. The major breakdowns of public support for the state have occurred when the military appeared to be violating or attempting to change the rules of the semi-democratic game, at the expense of the monarchy, the political elite or both.

corporations were authorized to cut wood in the national forests and sell it to private sawmill and lumber businesses. The provincial logging companies were jointly owned by the national government (30%), FIO (20%), provincial lumber yard and sawmill owners (20%), private logging companies (15%), and other timber processors (15%). Though the shareholding system was supposed to balance the interests of the general public, the government, the logging and wood processing industries, the FIO and private logging companies usually held proxies for other shareholders (Chaiyapechara 1993: 153).

The parastatal logging corporations provided substantial profits for their shareholders and contractors, and therefore equally substantial opportunities for political patronage. Patronage networks linked national and provincial officials in the FIO and RFD, national and provincial businessmen in the logging and construction industries, and military officers and politicians who served on the boards of the FIO and the provincial logging corporations (PC13 1996).⁵ In general, logging concessionaires operating under the aegis of the provincial parastatals did not follow the requirements of the selective logging system. Consequently, the most valuable stands of old growth hardwood trees were rapidly depleted (RFD 1993c: 28). Though the logging process was unsustainable, commercial forestry did contribute to GDP and exports. Sales of primary forest products (i.e. logs and lumber) accounted for between 1 and 2 percent of GDP in the 1950s and 1960s, peaking at 2.5 percent of GDP in the mid-1970s (Sadoff 1992: 18-19).

2. Agricultural, settlement and forest policies in conflict, 1960-72

As in the Philippines, the opening of forest areas by logging roads, excessive cutting by logging companies and inadequate efforts to protect logged-over forests led to large-scale encroachment and conversion of forests to agriculture. Relative to the Philippines, however, Thailand's government agricultural policies and private agricultural markets probably played a greater role, and commercial forestry policies a somewhat smaller role, in encouraging deforestation.

From the 1950s through the 1970s, Thailand's agricultural growth was almost entirely based on expansion of cultivated area, rather than improvement of yields on existing agricultural land. Moreover, both government policies and private markets encouraged farmers to diversify from rice production into other export crops (especially cassava, sugar and corn) that could be

⁵ PC = Personal communication. Please see the last part of the bibliography for further information.

grown on drier and more steeply sloping lands than wet rice (Onchan 1990: 14). The government taxed rice (the so-called "rice premium"), and subsidized fertilizers, water and pesticides needed for other crops. Private traders also provided seeds and credit for non-traditional export crops (World Bank 1978: 4-6). As a result of policy and market factors, the agricultural sector's share of land use continued to increase, even as its share of GDP declined (see Figures 1 and 2).

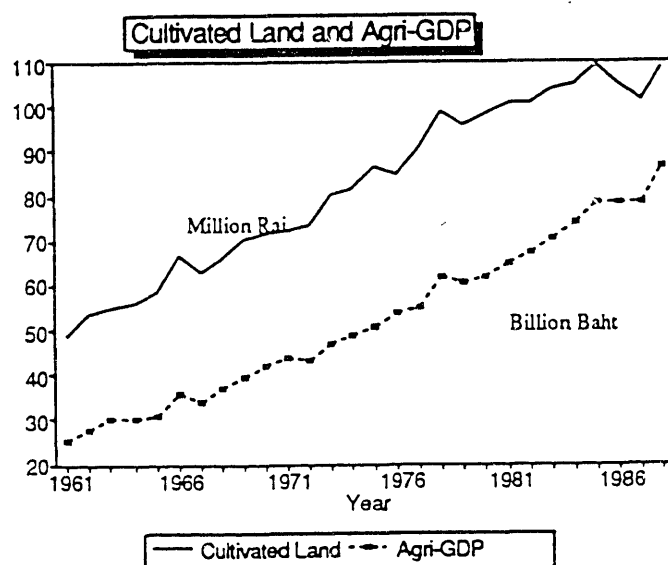


Figure 1. Source: Panayotou and Parasuk (1990: 14).

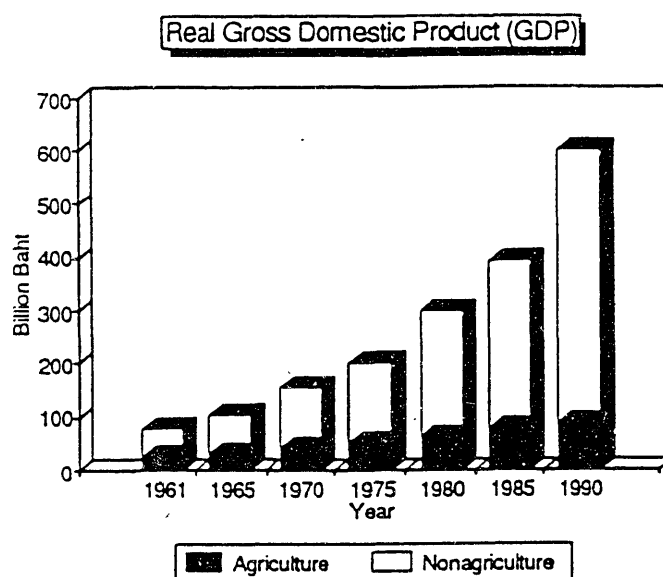


Figure 2. Source: Panayotou and Parasuk (1990: 22).

Bringing additional land into production required clearing the country's forests. Thus agricultural policies and market forces, along with forestry policies, contributed directly to deforestation (see Figure 3).

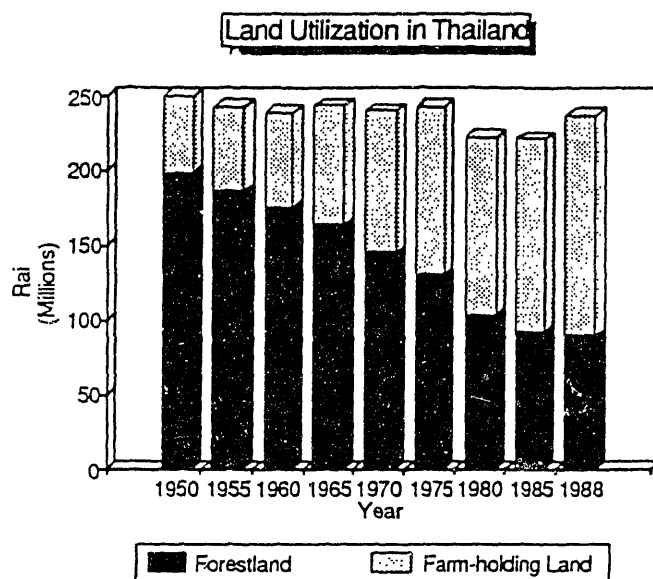


Figure 3. Source: Panayotou and Parasuk (1990: 16).

Settlement policies were the third force contributing to deforestation and eventually to land use conflicts. During the 1950s and 1960s, the Interior Ministry promoted settlement and agricultural development in forested areas. Motivated as much by the desire to strengthen state control in rural areas as by agricultural development goals, it provided roads, schools, electricity and administration for settlers on public forest lands. It continued to do so despite the fact that its actions were in direct conflict with RFD's policy of evicting "squatters" from these lands (Kemp 1991).

Agricultural and settlement policies and market forces brought agricultural expansion into direct conflict with forest conservation. Wet rice production in central Thailand, rubber plantations in southern Thailand, and dryland crops (especially cassava, corn and sugar cane) in northeastern Thailand drove widespread forest clearing. The northeast, where there was relatively little commercial logging but very rapid growth in agricultural production, lost 39% of its forest cover in the decade from 1963 to 1973 (World Bank 1978: 76). Nationally, Thailand's forest cover declined 60% between 1950 and 1980, from 31 million hectares to less than 13 million

hectares (Hirsch 1993:27) (See Figure 4). By the mid-1980s, the North was the only region of the country where well-stocked forests covered more than a quarter of land area (calculated from RFD 1993b: Table 2.4).

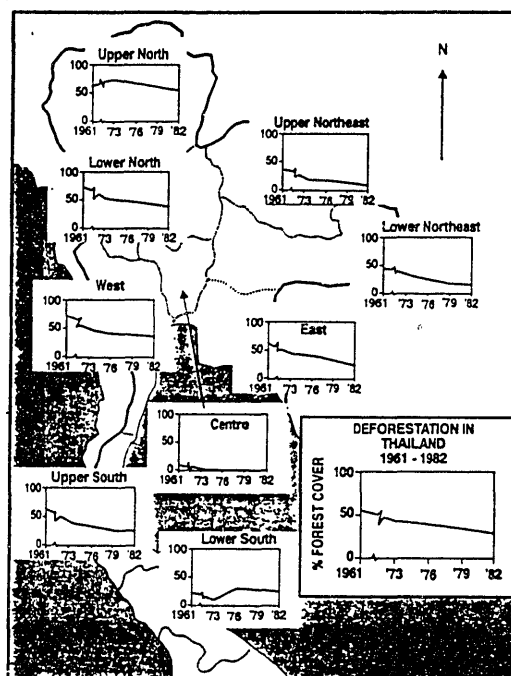


Figure 4. Source: Hirsch (1993: 28).

Since the early 1960s, Thai governments have reacted to the growing conflict between forestry and other land uses by making forest conservation an element of national development policy. In 1961, Field Marshall Sarit's First National Economic Development Plan (NESDP) declared that 50 percent of the country (roughly 26 million hectares) should remain under forest cover until the population rose above 30 million. At that point forest cover could drop further, to 40 percent of land area; in no case should forest cover fall below the 40 percent level (roughly 20 million hectares).⁵ Though the population reached 30 million in the mid-1960s, the 50 percent target was repeated in three subsequent NESDPs; the government endorsed the 40 percent target only in 1977, in the Fourth NESDP. In 1964, the government passed the Reserved Forests Act to simplify and accelerate the legal process for declaring reserved forest areas (Charoenpanij 1993: 12-16).

⁵ The technical basis for the 50 and 40 percent targets is unclear, but it may have been drawn from a late 1940s FAO hydrology study which recommended that at least 38 percent of the country (the heads of the country's main watersheds) remain forested (RFD 1993b: 30).

Recognizing that RFD did not have the staff to demarcate forest areas quickly, the government turned the task over to the Department of Lands (renamed the Department of Land Development (DLD) in 1964), another agency in the Ministry of Agriculture. Between 1962 and 1966 the Department of Lands classified 27 million hectares as permanent forest, exceeding the NESDP's 50% target (Panayotou and Parasuk 1990: 23). Unfortunately, it did so with scant attention to existing land claims and land uses in and around reserved forests. It also left the RFD with the job of gazetting permanent forest as officially reserved forest while agricultural markets and policies were stimulating forest clearing, and while the Interior Ministry was busily registering, regulating and servicing the country's fast growing rural population with little regard for forest boundaries drawn by the Department of Lands or by RFD.

Government decisions to expand commercial logging and the national parks system sharpened conflicts among ministries, and among forest user groups. In 1968, the Thanom government decided to offer long-term forest concessions in areas that the RFD had designated as reserve forests. Within a year, the RFD had authorized 500 forest concessions covering most of these forests. In the early 1970s, RFD also accelerated the establishment of national parks and wildlife refuges. Through the next decade, the RFD clashed with the Interior Ministry over settlements in forest concessions and in protected areas (Pragtong and Thomas 1990: 172).

3. The democratic interlude and land reform, 1973-76

In 1973, Bangkok student protesters, urban workers, farmers and middle class supporters forced the resignation of Prime Minister Thanom and leading members of his military-dominated government. The immediate cause of the Bangkok protests was the detention of student leaders who were calling for a return to democratically elected government. Underlying the protests was a fear that General Thanom's nominal subordinate General Praphas was attempting to create a quasi-dynasty by positioning his son-in-law to succeed Thanom (Cooper 1995: 231-37).

The civilian governments of the next three years enacted a number of political and social reforms aimed at reducing U.S. influence, curbing the power of the military and addressing the emerging problems of land scarcity and growing economic inequality. These reforms encouraged democracy advocates and frightened senior military leaders. They did not, however, eliminate the military's capacity to remove elected civilian leaders. Unable to reverse the growing animosity

between the student-led democracy movement and the military and economic elites, or create a stable governing coalition, the democratic governments lost public support. After a bloody clash between Bangkok university students and para-military groups in the fall of 1976, the government of Prime Minister Seni resigned and was replaced by a military government (Samudavanija 1989: 314-15). Some members of student, labor and farmer groups took to the country's forests and joined the long-simmering Communist insurgency (Girling 1981: 117).

The RFD's difficulties in keeping forests free of people increased during the brief period of democratic government. Farmers' demands for land reform dominated public debate and led to the enactment of land reform and a forest amnesty. The Agrarian Land Reform Act of March 1975 created an Agricultural Land Reform Office (ALRO) within the Ministry of Agriculture, to implement the transfer of public lands to the landless, and private lands to tenants. The Act required the RFD to identify occupied public forest lands suitable for agriculture and transfer them to ALRO. ALRO would then award usufruct (right of occupancy and use) certificates to the occupants. A month after the Act passed, the government of Prime Minister Kukrit declared an amnesty for occupants of forest lands. The Kukrit cabinet also directed the RFD to create a "Forest Village Program" for residents of occupied forest lands which were too fragile to be turned over to ALRO for agricultural use. RFD was to issue occupancy certificates for these lands, in exchange for occupants' agreement to stop clearing trees, plant additional trees and use farming methods that minimized erosion (TDRI 1990: 24).

4. Counterinsurgency and military control of forests, 1976-80

The ink had barely dried on the land reform law and the forest amnesty when the military took power again in 1976. During the next three years, implementation of land reform on private lands slowed to a virtual standstill, due to resistance from large private landowners and lackluster support for ALRO from military-dominated governments (Ramsay 1982).

Many tenants and landless farmers saw occupancy of public lands as their only real hope of land ownership. Spurred on by unsettled economic and political conditions and the diversion of military and police attention to the suppression of the fast-growing Communist insurgency, land-hungry peasants moved into forests throughout the country. Farmers whose lands abutted forest areas, landless migrants from the central plains, and land speculators who believed land

values would continue to rise all cleared forests in order to claim occupancy and use rights under the land reform law (Ramsay 1982). As a result, the deforestation rate nearly doubled from 1973-75 to 1976-79 (TDRI 1990: 12).

In 1979, at the peak of the counterinsurgency campaign against the Communist Party of Thailand, the Thai military closed most logging concessions and attempted to concentrate forest dwellers in settlements under military supervision.⁶ The military also pushed the RFD to expand the Forest Village Program to include community planning, infrastructure and rural development.

Like the Philippine Integrated Social Forestry Program, the RFD's Forest Village Program was inadequately staffed and budgeted to cope with the expanded set of tasks and the rapidly growing migrant population. Distrust and open conflict between RFD officials and forest occupants also hindered program implementation (Pragtong and Thomas 1990: 174). In the same year, the cabinet directed RFD to issue tenure certificates (known by their Thai initials, STK) to occupants of forest land who could prove they had lived in the area before the 1975 land reform and who agreed to practice sustainable agroforestry. STK certificates were not transferable, however, and were only good for periods of 5 years. Therefore, they could not be used as collateral, and they did not stimulate either greater farm productivity or a reduction in the rate of forest encroachment (Onchan 1990: 69).

At the end of the volatile 1970s Thailand's forest policies, like many of its national and sectoral policies might charitably have been described as ad hoc. Commercial forestry, whose expansion had been the basis for forest policy since the turn of the century, was in a state of suspension, and not likely to regain its former prominence given the decline in valuable hardwood stocks and the rise of competing land uses. Conservation forestry, particularly the national park system, had begun to expand rapidly in the mid-1970s. Urban middle class environmentalism and the rise of U.S.-trained conservation foresters within RFD were the most important factors driving this trend (PC13 1996, FFKU 1987). Community forestry was also becoming a stronger policy priority, closely linked to land reform and counterinsurgency. Conflicts among competing uses of forest land--conversion to agriculture, commercial logging and tree plantations, strict

⁶ This decision followed a 1977 decision by the military government to ban log exports. The log export ban was an attempt to slow deforestation, and also to promote investment in the wood processing and wood products industries (Sadoff 1992: 22).

protection for nature conservation and watershed protection, and management by local residents for small-scale use--were becoming intense, but neither RFD nor the national government had set any clear priorities among these goals, nor had they set guidelines for dealing with conflicts among forest claimants on a case-by-case basis (Pragtong and Thomas 1990: 174-75).

III. Thai forest policy reforms since 1980: national and sectoral turbulence

Since the late 1970s, Thai government forest policies have favored first one, then another of the competing claims on Thailand's remaining forests, without establishing any stable allocation of forest lands or clear forest management guidelines. National politics have played an important, often decisive role in determining the timing and content of forest sector policy reform proposals, though sectoral actors have had some influence on their content and their success. This section reviews both national political circumstances and sectoral politics since 1980, analyzing the policy process and its outcomes to assess the validity of the reform initiation propositions.

A. The Prem governments and the National Forest Policy, 1980-88

1. National economic adjustment and political liberalization under Prem

From 1980 to 1988, prime minister General Prem Tinsulanonda managed a national political realignment in favor of greater economic efficiency and limited democratization. Prem was a far-seeing and skillful reformer who had risen through army ranks, become disillusioned with the army's counter-insurgency strategy in the late 1970s, and concluded that Thailand's military and bureaucracy no longer had the legitimacy or the capacity to direct the country's economic development. Though Prem was by no means a democrat, he saw the need to combine political and economic reforms in order to undercut the insurgency, revive the economy, and facilitate a gradual democratization of the postwar "bureaucratic polity." During his years in office he survived two coup attempts by disgruntled military officers and headed three elected governments, without ever standing for election himself (Cooper 1995: 270-72; Hindle 1987: 6-10; Samudavanija 1989: 331-33).

In 1981 the first Prem government initiated efficiency-oriented reforms in trade, finance and monetary policy, partly in response to the 1979 oil shock and the following global recession, and partly to counter the continuing decline in terms of trade for Thailand's traditional commodity exports (Sahasakul et al. 1991: 79-82). Prem's governments met the challenge of the second oil shock relatively smoothly, undertaking a series of macroeconomic and fiscal reforms supported by World Bank and IMF loans. The government also assisted new export industries in textiles, electronics and processed food (Muscat 1994: Ch. 6).

To build and maintain support for economic liberalization, Prem made extensive use of high-level consultative bodies representing government, academia and business. These consultative groups helped Prem's technocrats to adjust the scope and timing of reforms to reduce political resistance. Nevertheless, their membership was hardly representative of the Thai people. Though small farmers and rural non-farm workers were nearly 2/3 of the population, there were no farmer representatives on the Joint Public Private Consultative Committee (JPCCC) on economic development policy (Muscat 1994: 183; 257-58; 271).

The limited representation of rural interests in high-level policy making forums was not accidental. After Prem's amnesty and political liberalization program effectively ended the insurgency in 1983-84, rural reform became a much less pressing issue. Thereafter, Prem's governments were much more focused on efficiency than on equity reforms. The major economic reforms affecting the rural sector were reductions in export taxes on agricultural exports (Sahasakul et al. 1991: 126-27).

The one area in which the government did make a substantial commitment to rural smallholders was its land registration program. Though the Prem governments did not share the equity commitments of the 1973-76 progressive governments, they did see the need to improve the productivity of the country's agricultural land as population continued to grow. As noted above, Thai land use policy had foundered since the early 1960s in conflicts between maintaining forest cover and encouraging agriculture-based rural development. The World Bank strongly encouraged the government to accelerate land titling to give farmers security of ownership. The World Bank's staff believed that secure title would significantly increase farmers' access to credit and their incentives to invest in intensive agriculture (World Bank 1978: 83-84). From 1981 to 1986, with World Bank funding, the Ministry of Agriculture did accelerate its land certification

program, but the achievement was small compared with the magnitude of the problem. In 1986, more than a third of agricultural land still lacked any legal status; only 15% of agricultural land had full title documents (Onchan 1990: 64-65).

The Prem governments paid little attention to environmental issues, and then mainly in reaction to specific controversies. Within the government, the National Environment Board (NEB), a policy advising body within the Ministry of Science and Technology, had no authority to coordinate the development or implementation of policy by other government agencies, and the Prem governments did not create any institution comparable to the JPPCC for public-private dialogue on environmental issues (Kaosa-ard et al. 1995: 69-72). The Thai royal family was a more influential voice in favor of environmental protection, but it had no formal authority to make environmental policy. King Bhumibol and other members of the royal family did help raise environmental awareness among Thais through speeches, Royal Projects that promoted environmental action (e.g. reforestation, creation of national parks and sanctuaries, urban pollution control), and sponsorship of leading environmental NGOs (e.g. Wildlife Fund Thailand) (PC5 1996).

In sum, the policies of the Prem governments of 1980-88 were most strongly influenced by advocates for economic efficiency in the government and the country's leading private sector "peak" associations. Advocates for the rural poor had some influence on rural development policy through the land registration program, but never dominated national debate, and advocates for environmental protection had very limited representation or influence within government, though non-governmental advocacy groups did begin to influence policy through site-level protests and national media campaigns.

2. Forest sector actors and politics under Prem

When Prem came into power, status quo beneficiaries had already lost much of their influence at the national level due to the declining commercial and patronage value of logging concessions. On the other hand, the country's pulp and paper mills were becoming more active in the forest sector as they sought out land for pulpwood plantations. By the mid-1980s, RFD had a new source of patronage: tree plantation leases. During the same period, political liberalization was creating "political space" for environmental NGOs, community development NGOs, tribal groups

and migrant farmers to protest against government-sanctioned projects, including dams, commercial logging and commercial reforestation projects that threatened forests and livelihoods. As conflict over the allocation of forest land intensified, members of the Thai bureaucratic and political elites were drawn into the debate. They responded by trying to build an elite consensus on the future direction of forest policy.

RFD, FIO, loggers and tree plantation investors: In 1980, the core set of status quo beneficiaries within the sector were RFD and Forest Industry Organization officials and their clients in the logging industry. The benefits of their control over forest resources had, however, diminished drastically over the past several years. The military's counterinsurgency campaign, culminating in its 1979 decision to close most logging concessions, had dealt the logging industry a serious financial blow. From 1975 to 1985 annual log production fell from 3.3 to 1.8 million cubic meters, and the primary forest industries' share of GDP fell from 1.6 percent to 0.8 percent (Chantanaparb 1990: 10). The forest products industries continued to grow, however, making up for the fall in domestic wood supply by substituting rubberwood for natural timber and by importing hardwoods from Malaysia (Sadoff 1992: 22). By reducing their dependence on domestic loggers, the forest products industries further diminished the constituency for logging. During Prem's term, the logging industry continued to decline as a source of domestic income, export earnings and raw materials.

The RFD and the Forest Industry Organization (FIO) were not much better off. A number of military officers, senior civil servants and politicians with business backgrounds continued to have logging concessions. For most of these political elites, however, forest concessions were small and shrinking assets in patronage portfolios that were increasingly oriented toward urban industry, commerce and real estate (Christensen 1993, esp. 9-13). As the heyday of commercial logging ended, both the RFD and the FIO lost influence within the military, the Ministry of Agriculture, and the Parliament (PC15 1996).

The depletion of the country's commercially valuable forests did have one potential benefit for RFD and FIO. As Thailand's pulp and paper industries became strong exporters in the 1980s, their demand for pulpwood grew. Because this wood has a relatively low unit value, transportation costs are a relatively large share of unit costs to wood processing firms. Domestically grown wood could therefore have a substantial cost advantage over imported wood.

Consequently, a growing number of commercial pulp and paper producers began to seek access to large areas of public land to use as wood plantations (Chuntanaparb 1990: 18-27).

During the Prem years, RFD's power to grant reforestation concessions on large parcels of forest land became an important new patronage resource, and sparked a major policy conflict between plantation investors and advocates for other uses of forest lands. FIO also began to undertake reforestation in joint ventures with private firms, using its relatively close relationship with RFD to find out about and gain access to parcels of forest land (Chuntanaparb 1990: 18-29). Finally, the pulp and paper firms themselves developed patronage relationships with a number of regionally-based politicians, augmenting their political influence at the national level (Hirsch 1993: 64-65; Kooacharoen 1992: 67-69).

Environmental NGOs: During the Prem years, environmental NGOs were beginning to expand beyond a core of biologists and naturalists to include a broader urban middle-class constituency. They gained visibility and support by fighting against large development projects. Beginning in the early 1980s, a broad-based coalition organized against a proposal by the Electricity Generating Authority of Thailand (EGAT) to build a large hydroelectric dam downstream from one of Thailand's most popular national wildlife sanctuaries. The Nam Choan dam would have flooded several thousand hectares of forest and displaced thousands of small farmers and hill tribes living in and around the park. By the mid-1980s, a coalition of middle class environmental activists, students, scientists and farmers' groups had banded together to challenge the dam proposal. This coalition succeeded in gaining the attention of the Bangkok press, and eventually of senior government officials, who shelved the project in 1988 (Hirsch 1993: 133-47).

The Nam Choan dam controversy had two lasting effects. First, it established forest protection as a national issue. Second, it spurred the expansion and diversification of the Thai environmental movement beyond a core of ecologists and middle-class naturalists, to include urban students, farmers and community organizers. The links between environmentalists and equity-oriented farmers' advocates helped both movements, by expanding public support for environmental protection and giving small farmers a "safe" issue (i.e. one not directly linked with the insurgency's demands for redistribution of rural land and capital) around which to organize (Hirsch 1993: Ch. 10; PER 1992: 4-8).

Though environmentalists did form alliances with farmers' groups to protest large projects that would have harmed both forests and farms, the environmental movement was internally divided on the question of whether people should have access to forests inside the boundaries of protected areas. The more traditional conservation groups (e.g. Wildlife Fund Thailand) argued that slash-and-burn farmers were just as great a danger to forest protection as dams and loggers. The more progressive environmental groups (e.g. Project for Ecological Recovery) argued that it was both unnecessary and unfair to force resettlement of people living in and around forest areas. They proposed that instead of resettling these migrant and tribal groups, government and non-government organizations should help them practice sustainable small-scale forest harvesting, and enlist them in protecting forests against encroachment by outsiders (PC11 1996). These internal tensions in the environmental movement did not become acute during the Prem years, however, because almost all environmentalists agreed that the top priority should be to stop dams, logging operations and commercial reforestation projects in sensitive forest areas.

Uniform exclusion from government policy making fora helped environmental NGOs maintain a united front. Even the environmental NGOs with royal patronage were not allowed to participate in government forest policy making. At best, they had opportunities to speak during public hearings on forest policy initiatives, and informal contact with government officials (Chaiyapechara 1993: 154; Kaosa-ard et al. 1995: 95-100).

In short, the nascent environmental movement framed forest protection as one of the most important challenges facing the country in the 1980s. Though excluded from policy making fora, leading organizations were still able to affect policy through informal dialogue with senior government officials, site-level protests in conjunction with farmers' groups, and media stories about those protests.

Equity-oriented NGOs and farmer groups: Equity-oriented NGOs were even less influential in the forest sector than environmental NGOs. Until the insurgency ended in the mid-1980s, any non-government group that advocated redistribution of land or income was suspect in the eyes of the military and the bureaucracy (Turton 1987: Ch. 5). During the early 1980s, some equity-oriented NGOs (e.g. Local Development Institute, NORTHNET) and farmer groups used their alliances with environmental NGOs to present the concerns of small farmers in a way that the army and the bureaucracy would not find threatening (Hirsch 1993: 145). In 1985,

the formation of NGO-CORD, a national coordinating body for equity-oriented NGOs, significantly increased the potential for collective action by representatives of rural smallholder interests. NGO-CORD became instrumental in organizing regional and national demonstrations to protest government projects that displaced small farmers, and to demand a greater share of the benefits of Thailand's economic growth for the rural majority (Prasartset 1995: 102-103).

Equity-oriented NGOs became increasingly active in forest sector as commercial tree plantation firms began to challenge the rights of migrant farmers to occupy and use public forest lands. As the political climate became more liberal and the media more combative in the last two years of the Prem era, equity-oriented NGOs' ability to turn out large numbers of local protesters became a more valuable political resource. Though it remained difficult for equity-oriented NGOs to gain access to forest policy making fora through the end of the Prem years, they had unquestionably gained the attention of policy makers (Phantumvanit et al. 1990).

Other government agencies: As noted above, the Interior Ministry was the government agency whose interests were most clearly opposed to those of the RFD, but several other agencies also contested the RFD's control of nearly half of all Thai land. Most notable among them was the Ministry of Science and Technology, a relatively new agency whose permanent secretary, Sanga Sabhasri, was a forester by training. Sanga wanted to check the RFD's control over forest land allocation by creating a national forest policy making body with representatives from several ministries as well as the private sector and academia. Sanga had the ear of Deputy Prime Minister Pichai Rattakul, a former logger whom Sanga knew personally (PC9 1996).

This sketch of the interests and political resources of the major sectoral actors suggests that there was no dominant actor or coalition during the Prem years. The core status quo beneficiaries--RFD, FIO and the logging industry--had been substantially weakened by the closing of many logging concessions, and by the wood products industries' ability to substitute imported wood and rubberwood. Challengers to the status quo included environmental groups that wanted to preserve the remaining forest; rural development NGOs and farmers' organizations that wanted the government to recognize tribal groups' and farmers' right to occupy and use forest lands; pulp and paper industries that wanted access to forest lands for tree plantations; and other ministries that wanted to assert control over the disposition of forest lands. Of these reform

advocates, only the Ministry of Science and Technology had strong cabinet-level connections, but the pulp and paper industry had a strong export orientation and plants located throughout the country, giving it significant potential leverage in the export-promoting Prem government and among regionally-based members of parliament.

3. Forest sector reforms under Prem: the 1985 National Forest Policy and commercial reforestation

National political circumstances affected the timing, content and success of reform proposals in the forest sector during the Prem years in two ways. First, in line with the national government's structural adjustment and export competitiveness goals, the government proposed to improve the pulp and paper industries' export performance by involving private firms in commercial reforestation. Second, by the mid-1980s the Prem governments' policy of political liberalization allowed advocates for environmental protection and social equity to challenge the government's reforestation strategy. Subsequently, no sectoral actor or coalition was able to dominate forest policy making. Public opposition derailed government-initiated reforms that favored commercial reforestation, but the government was unwilling to reallocate forest land from commercial to conservation or community use.

The National Forest Policy: The major government-initiated forest policy reform during the Prem years was the development of the National Forest Policy (NFP). The impetus for the NFP began in 1979, when the military government imposed a moratorium on logging in many mountain and border areas as part of its counterinsurgency policy. The RFD was barraged by requests from logging concessionaires for exemptions, and the process for granting exemptions became another opportunity for political and financial patronage (Chaiyapechara 1993: 153; PC15 1996).

In 1982, as the Prem government looked for ways to increase efficiency across all major economic sectors, Deputy Prime Minister Pichai Rattakul convened a National Forest Policy Committee to rationalize the allocation of forest land. Pichai's family had logging interests, but his views on forest policy were most heavily influenced by Sanga Sabhasri, the reform-minded permanent secretary of the Ministry of Science, Technology and Energy. Sanga wanted to create a new national forest policy-making body that was insulated from RFD patronage politics and

reflected a set of national interests broader than those of the commercial logging and wood processing industries (PC9 1996).

Pichai and Sanga, like many other informed observers of the Thai forest sector, recognized that RFD had failed to maintain 40 percent of the country's land area as forest (by the early 1980s satellite data showed that no more than 30 percent of the country remained forested). On the other hand, they also recognized that reforesting 10 percent of the country would require a level of effort far beyond RFD's capacity, and that reforestation would have to be accomplished without displacing farmers on a massive scale.⁷ They wanted to develop a national forest policy that would strike a reasonable balance between forestry and agriculture, and would increase incentives for private sector reforestation (PC3 1996; PC9 1996).

Recognizing that RFD would be reluctant to admit the severity of problems in the forest sector, Pichai established the National Forest Policy Committee with himself as chair; the RFD Director served as the Committee's Secretary. The other committee members represented government agencies with an interest in forest policy. Most notable among them were the ministries of Agriculture, Interior, and Science and Technology (which had responsibility for environmental protection through the Office of the National Environment Board). There was only one private sector representative, from the Forest Industry Association of Thailand. Several academics from the country's leading forestry school, Kasetsart University's Faculty of Forestry, also participated as technical advisors. No NGOs participated in the committee, though they were consulted in public hearings (Chaiyapechara 1993: 154; PC9 1996).

Using estimates already developed by RFD planners, the committee affirmed the government's long-standing goal of maintaining 40 percent of Thailand's total area under forest cover. They further specified that 25 percent of Thai lands should be managed as commercially productive forest, and 15 percent should be managed as protection forest. All lands with 35 percent or greater slope were to remain forested and could not be alienated to private owners. To achieve these overall forest area and use goals, the Committee proposed a number of organizational and policy reforms. Among the most important were the proposals to allow both smallholders and private firms to grow trees on degraded public forest lands; and to promote

⁷ Government estimates suggested that roughly 10 million people, one fifth of the country's population, occupied public forest land in the mid-1980s (Onchan 1993: 2).

integrated wood production and processing firms in the pulp and paper industry (Charoenpanij 1993: Annex 1).

Unfortunately, as in many areas of Thai policy and law, the National Forest Policy's "action points" were so general and vague that they were not operational. As one critic within the RFD put it, the policy was "an academic proposal where normative prescription is the rule...[it] lacks coordination and clarity...no area received priority" (Chaiyapechara 1993: 154, 160). Because the NFP left ample room for committee members and other interested parties to interpret it according to their own priorities, political influence became the most important factor in determining which NFP reforms would in fact drive government policy.

Commercial reforestation under the NFP: As argued above, the national political realignment under Prem favored economic efficiency and private sector investment. In line with these national goals, the Prem cabinet had supported commercial reforestation even before the NFP was approved. The Fifth National Economic and Social Development Plan (1982-86) called for the government to give incentives for private reforestation; a 1983 law authorized RFD to rent forest land for tree plantations and exempted plantation logs from the log export ban; and a 1984 cabinet resolution directed the Ministry of Agriculture and Cooperatives and the RFD to set up programs to support private tree plantations (Chuntanaparb 1990: 35). In all of these initiatives, the government was influenced by private commercial interests in the wood and paper industries, as well as the analyses of the National Economic and Social Development Board (see e.g. CUSRI 1982).

The NFP continued and accelerated the government's support for private commercial reforestation, arguably at the expense of both equity and environmental protection goals. In order to reach the 40% forest cover goal by the end of the Sixth Plan (1991), the NFPC determined that a substantial reforestation effort would be necessary. In the early 1980s, roughly 30% of Thailand was forested (16 million of 51 million hectares) (Phantumvanit and Sathirathai 1988: Table 1). To achieve the goal of 40% forest cover, roughly 6 million hectares would need to be reforested, at a rate of 1 million hectares per year. Since 1960, however, less than 1 million hectares had been reforested by the RFD and private companies combined; the average reforestation rate had been roughly 15,000 ha/year (RFD 1993a: 5).

Reforestation in Thailand had been slow and sporadic for two reasons: lack of financial incentives for the private sector and lack of institutional capacity in the RFD. As the National Forest Policy Committee assessed the situation in the mid-1980s, however, it appeared that the demand for wood from Thai and Japanese pulp and paper mills and the limited production available from the remaining natural forest logging concessions meant that private commercial investments in plantation forestry could be profitable. The major constraints on private sector reforestation were land and security of tenure. Land suitable for forest plantations was scarce because most potentially suitable land was occupied by farmers, with or without formal title documents. The available parcels were usually too small for commercial investors, who needed large contiguous areas to realize economies of scale. Tenure was insecure because the RFD had never established a clear policy on the rights of private companies to grow and harvest trees on national forest land (Chuntanaparb 1990: 28-32).

To overcome these problems and dramatically increase private sector investment in forest plantations, the NFPC tasked the RFD to identify suitable land areas and revise its regulations to make it easy for private investors to plant and harvest trees on national forest land. The RFD established a Private Reforestation Office and began to identify potentially suitable parcels. It used a mixture of negotiation and coercion to reclaim plots from farmers and assemble parcels big enough to attract private commercial investors. Investors who could demonstrate competence in forest plantation were given access to these RFD-assembled parcels at very low lease rates. Though there do not appear to be any accurate figures on the total area of new plantations established between 1986 and 1989, it appears that private investors established between 100,000 and 250,000 hectares of commercial plantations, far short of the NFP target but far more than had been established in any previous 4-year period (estimated from Onchan 1990: 50 and RFD 1993a: 5). Most private plantations planted eucalyptus, a fast growing species whose main buyers are pulp and paper mills (Visetbhakdi 1989: 248-250).

Eucalyptus plantations offered sizeable profits for large private investors,⁸ but their establishment often entailed social and environmental costs to adjacent areas. Though there are no good numerical estimates, coercive land acquisition practices by private firms and RFD officers displaced a significant number of smallholders. Further, because eucalyptus trees are

⁸ Though eucalyptus was a smart investment for well-capitalized firms, it was not profitable for smallholders with higher discount rates and smaller plots (Tongpan et al. 1990: Ch.4).

water-intensive, they also drew down the water table in some areas, raising irrigation costs and hurting yields for farmers abutting plantations. Environmentally, monocrop eucalyptus plantations eliminate ground cover, providing neither good protection against soil erosion nor a hospitable environment for other flora or fauna. By encouraging investment in eucalyptus, the NFPC and the government as a whole favored economic goals at the expense of social and environmental goals (Tongpan et al. 1990: Ch.4).

Protests against commercial reforestation: The rapid spread of eucalyptus plantations sparked a backlash from small farmers and environmentalists. Small farmers evicted by the RFD from national forest land protested and demanded legal recognition of their right to occupy land they had cleared and planted. Other farmers whose fields abutted eucalyptus plantations claimed that eucalyptus, a plant with relatively high water demands, was lowering the water table and harming their crops. Environmentalists protested that eucalyptus and other monocrop plantations were no substitute for natural forest, because of their low biological diversity, limited usefulness as protection against soil erosion, and their potential impact on water tables and adjacent forest and agricultural land (Phantumvanit et al. 1990).

The first local protests against commercial reforestation grew into an organized national protest movement. This movement built on the links between environmentalists and farmers formed during the protest against the Nam Choan dam. Using similar tactics, farmer groups and their urban allies staged a number of high-visibility demonstrations in which farmers evicted from national forest land re-occupied it and/or burned tree crops planted by private investors (PER 1992: 11-17).

In response to the commercial reforestation controversy, senior officials in the RFD and the Prem cabinet, including Prem himself, decided to try to find ways to make it profitable for small farmers to plant trees, either for household use or for sale to commercial users. The Asian Development Bank was interested in financing commercial forest plantations in Thailand, and financed a feasibility study for a major smallholder plantation program (PACMAR 1989). These initiatives had just begun to receive serious study when Prime Minister Prem resigned in 1988.

Prime Minister Prem's legacy in the forest sector was in line with his broader political and institutional achievements: greater economic efficiency and growth, based on greater

collaboration between government agencies and private sector counterparts in policy development and implementation. In forestry as in other sectors, the Prem governments paid relatively little attention to equity or environmental goals except when they emerged as constraints on policy implementation. Under Prem, the National Forest Policy and commercial reforestation did achieve their immediate economic goals of increasing investment and export earnings in the forest sector, but only at the expense of social and environmental goals. Yet the Prem governments did contribute indirectly to those goals by tolerating political dissent. Political liberalization allowed a strong coalition of equity- and environment-oriented groups to form and to constrain the expansion of commercial reforestation. After Prem's resignation, this coalition built a national campaign to challenge some of the core precepts of national forest policy.

B. The Chatichai government and the logging ban, 1988-91

1. The national context: Chatichai and the rise of civilian politicians

In the middle of 1988, Prime Minister Prem finally lost patience with the squabbling and corruption of Thai national politics, dissolved his government and announced that he would not accept the post of prime minister again. The Chart Thai party, the largest in Prem's coalition, emerged after the election of July 1988 as the dominant party in the parliament.

Chart Thai's leader was Chatichai Choonhavan, a well-known centrist politician with a reputation for heavy election spending and equally heavy use of his ministerial positions for political patronage, especially in the award of public contracts (Cooper 1995: 328-29). Despite questions about his integrity and that of his party, Chatichai's formation of a civilian-led government with himself as prime minister was a political watershed for Thailand. He was only the third elected prime minister in Thailand's history (two elected prime ministers had led the country during Thailand's brief and chaotic "democratic interlude" of 1974-76), and the first to take office in a time of political stability.

Unfortunately, Chatichai and his coalition represented primarily their own financial interests and those of their clients, rather than the broader political interests of the country. From the time Chatichai took office in August 1988 to the toppling of his government by a military

coup in February 1991, his government gained an international reputation for venality (Tasker and Handley 1991).

In a narrow sense, Chatichai's coalition government represented a political realignment away from the reformist orientation of the Prem governments, in favor of a network of politicians and private businessmen who benefited from the use of political power for financial gain. In the broader perspective of Thailand's political development however, Chatichai's government was an important departure from the status quo. It represented a shift in political power from the military and bureaucratic elites toward civilian politicians, and to a lesser extent toward organized interest groups.

Although Chatichai was a former general and had close connections with both the military and bureaucratic elite, his government had won power by winning votes from the Bangkok middle class and voting blocs controlled by provincial elites. The Thai military leadership did not challenge the parliament's right to choose a non-military prime minister from among civilian members of parliament, nor Chatichai's right to choose civilians for key cabinet posts. Individual generals did lobby for positions in the government and for shares of government patronage, but the military's senior leaders did not control the process of forming a government in July and August 1988. Given the country's recent history of military-dominated governments and coup attempts against politicians who attempted to curb the military's role, the military's passivity in 1988 appeared to signal a sea-change in the civilian-military balance (Ockey 1992:32-34).

Though it was relatively free from military domination, the Chatichai coalition government was not closely controlled by organized interest groups either. The vast majority of Thais had neither the information nor the institutional networks necessary to form issue-based interest groups. Their voting decisions were based on the tightness with which they were linked to particular patron-client networks (and for those who were not tightly linked to a politically active patron, on who could pay the most money for their votes) (Christensen and Siamwalla 1993: 32-39).

There was one important exception to the vote-buying rule: Bangkok middle-class professionals, who provided the majority of votes for several of the smaller and more progressive parties in the Chatichai government. The Bangkok middle class did not represent any single interest, but it did support the Bangkok-based media and a growing number of public interest

groups (Christensen and Siamwalla 1993: 26-29). The Bangkok media and interest groups did not have much influence on electoral outcomes, but they could sway government decisions on controversial public projects and policy decisions (the Nam Choan dam controversy was one of several in the mid-1980s; others included the government's denial of AIDS as a problem, Bangkok traffic, and the impact of rapid real estate development on Bangkok and the surrounding countryside) (Prasartset 1995; Siriyuvasak 1994).

In the analytic framework of this thesis, the Chatichai government represented a complex political realignment that did not clearly favor any overarching policy goal. It could not be said to favor economic efficiency, because most of its leaders were primarily interested in using government powers to grant special favors to their businesses. It could not be said to favor social equity, except insofar as civilian patron-client obligations drove politicians to promote development projects in their districts. It certainly could not be said to favor environmental protection, since many of its members had interests in logging, mining, commercial aquaculture and other resource-intensive industries. Nevertheless, as a civilian-led government open to influence by business and professional groups and independent mass media, it was more arguably more sensitive to public opinion and interest group pressure than any previous government in Thai history.

2. Forest sector actors under Chatichai: NGOs and politicians

Under Chatichai, the National Forest Policy Committee did not exercise any substantial influence over forest policy. The Royal Forest Department also failed to provide policy leadership. As a result, there were no significant government-initiated forest policy proposals from within the sector during Chatichai's term (PC4 1996).

In the cabinet and parliament, politicians displayed much greater interest in particular parcels of forest land than in forest policy. The continuing decline of the logging industry throughout the Prem years had significantly reduced the value of logging concessions, but concessions for other commercial uses--reforestation, golf courses, and real estate development--had become more lucrative as Thailand's economy boomed in the late 1980s and land prices rose dramatically (Onchan 1993). Thus the Chatichai government could be expected

to support the status quo in the sector: nominal commitments to efficiency, equity and environmental objectives, with a heavy de facto bias toward commercial uses of forest land.

Arguably the only reform group strengthened by the election of Chatichai was Bangkok-based NGOs. Though they were in no sense integrated in the political coalition that supported Chatichai, environmental- and equity-oriented NGOs acting under the umbrella of NGO-CORD could influence public opinion through the media. Under Prem, they had been able to use this influence to block particular projects. Now, with a fully-elected cabinet, the NGOs had greater opportunity to use media pressure to affect policy making (Kaosa-ard et al. 1995: 103).

3. Forest sector reform under Chatichai: the logging ban

Within the forestry sector, the Chatichai government did not initiate any major policy shifts in its first several months in office. A number of cabinet members had commercial logging interests, and others were involved in the rapidly growing pulp and paper industry (PER 1992: 13). Though the new Agriculture Minister appointed a new RFD director, there was no significant attempt to change the overall policy direction. Rather, the Chatichai government supported previously established commercial reforestation policies and programs.

Despite the government's status quo orientation and its limited involvement in the forest sector, Thai forest policy changed dramatically and probably irrevocably in January 1989, when the Chatichai government declared a moratorium on commercial logging throughout Thailand. The ban was not the result of a careful policy development process within the cabinet or the Royal Forestry Department. It was a political response to a well-organized advocacy campaign that played on the government's sensitivity to organized public opinion in Bangkok.

The campaign against commercial logging had been building since site-specific protests against logging and reforestation began in the early 1980s. In the spring of 1988 a number of environmental and community development NGOs led by the Project for Ecological Recovery issued a "Green Declaration" calling on candidates for the upcoming elections to endorse a logging ban and the establishment of a new forest protection agency. Few candidates endorsed the Declaration, and the logging ban proposal did not receive much pre-election coverage. After the election, however, 22 logging companies whose concessions had been suspended when RFD reclassified some reserve forests as conservation forests demanded the right to resume logging.

Their demands gained media attention and sparked widely publicized debate between environmentalists and logging company representatives. In November 1988, the Chatichai cabinet asked the national Juridical Council to advise on the logging companies' claims (PER 1992: 13-14).

The same week, floods and mudslides swept through several towns in southern Thailand, killing over 300 people. The national media, Bangkok-based environmental groups and some of their provincially-based allies in the environmental and land rights movements portrayed the disaster as the result of excessive commercial logging. The campaigners and the media claimed that logging had left the steep hills of southern Thailand with inadequate tree cover to prevent soil erosion during heavy rains. Photographs of large numbers of logs that had swept through the towns on the flood waters seemed to confirm this argument (PER 1992: 15-17).

The actual causes of the flooding were almost certainly more complex. Most of the hills in the flooded area were not bare, but had been planted to rubber trees, which offer relatively good protection against soil erosion in heavy rains. The flooding probably resulted from a combination of unusually heavy rains; rubber tree planting patterns that channeled water into narrow areas in the valleys; and the easy flow of water through valley bottoms that had been cleared for agriculture (Sadoff 1992: 26; PC7 1996).

Regardless of how complex the causal chain actually was, the NGO advocacy coalition used the floods as a way to reinvigorate the campaign for a commercial logging ban. The campaign gained strength from the dramatic images of the floods and their aftermath in newspapers and on Thai television. Many Bangkok residents, already concerned about the severity of flooding in Bangkok during the monsoon, feared that further deforestation in the upper basin of the Chao Praya river (which flows through Bangkok after irrigating much of the country's central plains) could lead to even worse flooding. The campaign also gained indirect support from Thailand's widely respected King Bhumibol. The king was already known as an environmental advocate and a supporter of reforestation. He and other members of the royal family expressed concern about the link between deforestation and the floods (PC5 1996).

The leaders of the public advocacy campaign channeled this diffuse set of public concerns at the Chatichai government and Chatichai himself. They gave the media information about the logging interests of a number of members of the Chatichai cabinet, and pointed out the Royal

Forestry Department's record of corruption and mismanagement. By late December 1988, the logging ban proposal had become something of a *cause celebre* in Thailand, and a source of concern for the Chatichai government. For a cabinet whose members were highly vulnerable to accusations of corruption in the use of public office, the potential for the campaign to escalate into a crisis and the risk that individual cabinet members might be sacrificed because of their logging interests, the political benefits of a ban finally outweighed the individual financial costs.⁹ The cabinet declared a ban in January 1989, and the Parliament ratified it in May (Sadoff 1992: 26).

During 1989, many of Thailand's commercial logging investors abandoned their domestic concessions and shifted their operations into neighboring countries. Late in 1989, however, the government's credibility in enforcing the ban came into question. The media discovered that Senator Kitti, a major financial backer of the Chart Thai party, had been illegally logging reserved forests then applying for leases to plant eucalyptus on the now-degraded land through his Suan Kitti logging company. In February 1990, the government bowed to pressure from organized environmental and farmer groups to respond to this "Suan Kitti scandal" and halted the lease of degraded forest areas for commercial reforestation projects (Koocharoen 1992: 73-75). Environmental advocates began to call for reclassifying most of the country's remaining forest as protected areas. Their cause gained greater public attention later in the year, when the head of one of Thailand's oldest and most venerated national parks committed suicide after failing to win greater legal protection for the park (Singkran 1996).

The Chatichai government's decision to ban logging dramatically changed the terms of the debate on forest policy. Most of Thailand's commercial logging industry moved into neighboring countries, especially Burma and Cambodia. Within Thailand, advocates for economic, environmental and social equity goals debated the future use of more than 25 million hectares of public forest land that had been allocated for commercial forestry. Over the next seven years, advocates for commercial uses of forest land, who had already become discouraged by the limited success of commercial reforestation, continued to lose influence as supplies of low-cost timber from neighboring countries began to flow into Thailand, reducing the profitability of commercial plantation forestry. As the commercial value of forests fell, a dramatic series of political crises

⁹ Some cabinet members, including Agriculture Minister Sanan, may also have calculated that a logging ban would create opportunities to re-allocate public forest lands to favored constituents (PC7 1996).

and realignments created opportunities first for environmental and then for social equity advocates.

C. The NPKC/Anand government and forced resettlement, 1991-92

1. The NPKC coup and government by technocrats

In February 1991, the Chatichai government was toppled in a bloodless coup by a junta of senior military commanders. Their stated motivation was to stop the rampant corruption of the Chatichai government and rewrite the constitution to make it more difficult for corrupt politicians to stay in office. Their unstated motivation may have been to forestall the installation of a general loyal to Chatichai as the army's Supreme Commander, a move which they feared would establish civilian ascendancy over the military (Tasker and Handley 1991).

The generals who organized the coup against the Chatichai government set themselves up as the "National Peace-Keeping Council" (NPKC). Their first action was to create a caretaker government led by a senior and widely respected Thai diplomat, Anand Panyarachun. They promised to give Anand and his cabinet a free hand in most areas of domestic and foreign policy, and to organize a new set of elections within 12 months. Many Thais initially supported the coup and the NPKC/Anand government. They were unhappy with the corruption of the Chatichai government, and confident that Anand would not fall prey to the same temptations (Tasker and Handley 1991).

The NPKC coup shifted power from civilian politicians and civil society back toward military control. Relative to Chatichai's coalition, however the appointed Anand government represented a political realignment in favor of economic efficiency and environmental protection. The Anand government took major steps during 1991 to restore the technocrat-led system of macroeconomic and fiscal decision-making that Prem had established. Many of Anand's cabinet members had been senior members of the economic ministries and the NESDB under Prem, and they attempted to continue the process of reform that had stalled under Chatichai (Muscat 1994: 224-25). The Anand government also initiated a major rewriting of the country's environmental laws, drafting a National Environmental Policy Act that strengthened the environmental impact assessment system and a revised Wildlife Act that gave greater protection to the country's wildlife

sanctuaries (RTG 1992: 18-20). The government did far less to promote social equity. Though it stated a general commitment to decentralizing more government functions and promoting investment in rural areas, it accomplished little in this area (PC6 1996).

In short, the NPKC sought to restore the power and prestige of the military in political life, but it also recognized that it could not restore the legitimacy of military rule, and so it promised a return to "semi-democratic" institutions which would still maintain the military's effective veto power over appointments and key policy decisions. On the other hand, the NPKC allowed Anand to appoint a government which was both more committed to and more capable of carrying out economic and environmental reforms than the Chatichai coalition had been. Neither the military nor the Anand government, however, was strongly committed to equity-oriented reforms.

2. Forest sector actors under the NPKC/Anand government: military dominance

Within the forest sector, the military takeover disrupted an evolving debate over what should be done with Thailand's forests. The decision to ban commercial logging early in 1989 created an opportunity for a major reallocation of national forest land. After the ban, environmentalists and their organized farmer allies forced the Chatichai government to enact a moratorium on commercial reforestation. By the end of 1990, little scope remained for commercial use of forest land in Thailand. The coalition of advocates for forest conservation, community forestry and agricultural land reform were unable, however, to agree on how forest land should be reallocated among these alternative uses (Pragtong and Thomas 1990: 183-186). Before they were able to reach any internal consensus, the military coup significantly reduced their ability to influence national forest policy. Instead, the military leadership's own views about forest policy, views which had developed out of its counterinsurgency activities, led it to initiate a forest resettlement program known by its Thai initials, Kor Jor Khor.¹⁰

Though the military initiated Kor Jor Khor, the military's leadership did not see themselves primarily as advocates for change in forest policy. Rather, they sought to use forest land to achieve institutional goals that the military had established during the previous decade, and only secondarily to protect forests (PC1 1996). The military's perspective on forest policy had been

¹⁰ The program's official name was "Agricultural Land Distribution Project for Poor People Living in Degraded Forest Areas."

shaped by its efforts to relocate civilians during the counter-insurgency campaign of the late 1970s and early 1980s, and to a lesser extent by its more recent attempts to assist resettled villagers through a variety of army-directed community development programs (Pragtong and Thomas 1990: 173, 178). Rather than engaging in a broader debate about the future allocation of forest land with a variety of government and non-government stakeholders, military leaders (particularly General Chavalit and the commander of the 3rd Army in Northeast Thailand) saw the opportunities created by the logging ban and their own control of government as a way to expand military control over forest areas and the people in them.

3. Forest sector reform under NPKC/Anand: protected areas and the Kor Jor Khor resettlement program

Expansion of Protected Areas: Within the forest sector, the Anand government concentrated on strengthening protection of wildlife sanctuaries through legislation, a relatively minor reform that met little opposition (Charoenpanij 1993: 11). Encouraged by the government's pro-environment stance and searching for a new mission to replace its previous focus on commercial logging, RFD accelerated the reclassification process it had begun after the logging ban. By the end of 1992, it had classified most of the country's reserve forests as conservation areas, for eventual gazetting as parks and wildlife sanctuaries (MIDAS 1991: Appendix 2; PC2 1996). RFD was wildly optimistic in its classification decisions: the amount of land it designated for conservation exceeded the country's forest cover (see Figure 5).

The reclassification effort did not arouse strong public opposition during the Anand government's term, because organized advocates were concentrating on fighting the army's forced resettlement program (see below). It did sow the seeds of future conflict between advocates for conservation and community forestry, because many areas designated to become national parks and sanctuaries were already inhabited by indigenous people and settlers who had moved in before, during and after the period of commercial logging. As the following sub-sections will show, this conflict became far more intense after the military's forced resettlement program ended and the civilian debate on forest use resumed.

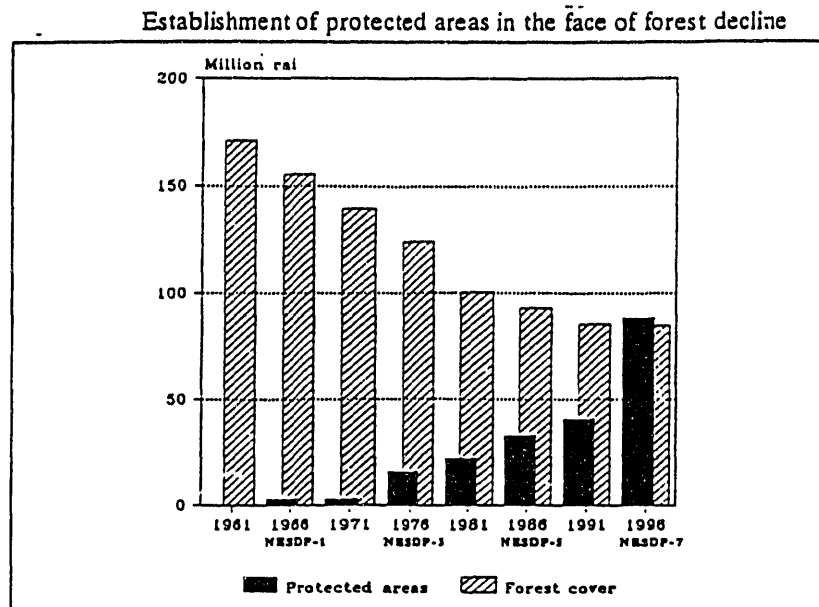


Figure 5. Source: RFD (1993b: 16).

Forced Resettlement: Senior officers in the military were not content to stop with forest land re-classification. They used their de facto control of the Royal Forest Department to initiate the Kor Jor Khor resettlement program. The stated objectives of Kor Jor Khor were to move farmers out of upper watersheds and resettle them in degraded lowland forest areas, where they would receive assistance in agroforestry. Thus the program was to have both environmental and social benefits (Handley 1991).

Under the Chatichai government, the RFD had developed a plan to resettle residents of upper watershed areas, but in 1991 the army used the authority of the NPKC to expand the scope of the program and its own part in implementing the program. The army and the RFD were to cooperate in identifying sensitive upper watersheds and available lowland areas, and the army was to take the lead in "assisting" farmers to move. In practice, there was considerable confusion and disagreement about what the program was supposed to achieve, and a great deal of conflict between farmers and the troops who were trying to "assist" them, sometimes at gunpoint, to relocate. Some social and environmental activists accused the military of using Kor Jor Khor to free up large areas of land for commercial reforestation, and coercing farmers to plant fast-growing trees for pulp and paper mills (Handley 1991; Hirsch 1993: 20-22). The army and

the RFD insisted that the real opposition to the program was coming from "landlords" who "owned" large areas of degraded lowland forest. These landlords did not have legal title to the lands they controlled, and therefore could be forced to give up most of their land to farmers who were being resettled from other areas (PC13 1996).

Whatever the army's motives, Kor Jor Khor aroused strong opposition from the farmers who were targeted for resettlement, people already living in the areas where they were to be resettled, and their allies in environmental and community-oriented NGOs. Like the logging ban campaign, opposition to Kor Jor Khor became a *cause célèbre* in the Bangkok media. Unlike the civilian Chatichai government, however, the NPKC was not prepared to back down from its support of Kor Jor Khor. In December 1991, it decided to expand the program from the Northeast to cover the entire country. Opposition continued to mount, but the program was not discontinued until after the military had been forced to give up power in May 1992.

Kor Jor Khor may have been a well-intentioned effort by the military to integrate environmental protection with land reforms that would improve the welfare of some of Thailand's poorest farmers. Because the military implemented it using coercive methods, the program failed to achieve these goals. In any case, the dramatic shift in forest policy clearly owed much more to political changes at the national level than to changes in balance of power among sectoral actors. Though some senior officials in RFD may have encouraged the military to undertake Kor Jor Khor, the key decision-makers were military commanders, not RFD officials (PC8 1996).

D. The Chuan government and land reform, 1992-95

1. National circumstances: democratization, equity and patronage under Chuan

The Kor Jor Khor program was one among several high-handed interventions by the military leadership in national and sectoral politics. The most important of these interventions was the military's attempt to control the formation of a government following the elections of March 1992. The NPKC had promised to allow elections within a year of the February 1991 coup. Recognizing that it could not put off elections indefinitely without causing serious civil unrest, the NPKC allowed them to go forward in March 1992. After the elections, no civilian-led party

gained a majority. The military leadership and the political parties it controlled then formed a coalition under the leadership of NPKC General Suchinda and elected him prime minister.

The installation of one of the NPKC leaders as prime minister caused outrage in the Bangkok middle class, which had interpreted the military's promise of a return to civilian government to include a civilian prime minister. After a series of bloody demonstrations against the Suchinda government in May 1992 by crowds that included a large number of middle class professionals along with students and workers, the King intervened and demanded Suchinda's resignation. The King then re-appointed Anand as caretaker prime minister until another election could be held in September 1992 (Handley 1992).

The Democrat Party under Chuan Leekpai won a bare plurality of the votes in the September 1992 election. In Bangkok, the party campaigned on a good government and anti-military platform, but in its regional strongholds in the South and the Northeast, the Democrats engaged in traditional vote-buying, and also promised to provide more land to poor farmers. The Democrats' electoral strategy mirrored the party's split identity. Since its formation in 1945, the party had stood for democracy (against military rule) and later for equity (it had initiated the country's first major land reform in 1974-75) but also for the interests of its leading politicians, many of whom were based in rural areas of the South and the Northeast (EIU 1993a: 6-7).

Chuan and the Democrat-led governing coalition sought to address equity issues more aggressively than any government since the 1976 coup, by promoting decentralization of government agencies and investments from Bangkok to the provinces, and by initiating a second major land reform. In large part, the land reform was a response to the economic boom of the late 1980s, which had driven rural land prices to unprecedented levels. Speculators (including Bangkok-based and provincial real estate developers, construction industry businesspeople, and government officials with influence over the land titling bureaucracy) bought land near urban areas, anticipating the spread of residential and commercial development. The higher land prices in peri-urban areas had a ripple effect into rural areas. As a result, poor farmers who lost their land or who needed additional land found themselves priced out of the market. Some found non-farm jobs, but a significant number cleared land in forest areas. Among those who cleared forest land, some did so as informal "contractors" for land speculators. They made informal

agreements to obtain occupancy certificates to the lands they cleared and sell them to the speculators at a modest price (Onchan 1993).

During the early 1990s, farmers who cleared forest land advocated for land reforms that would legalize their occupation of the forest land they had cleared. Land speculators themselves were another constituency for land reform. Chuan and many other politicians sought support from both these constituencies by promising land reforms in the 1992 electoral campaigns. They proposed to counter land speculation by giving titles to those who were actually farming the land, and restricting their ability to transfer those titles. When Chuan became prime minister, his attempt to deliver on his promise caused another major shift in national forest policy.

2. Politicians, ALRO, RFD and land reform

The Chuan cabinet passed a decree on land reform on May 4, 1993. The cabinet decree required the Royal Forest Department to transfer 44 million rai (approximately 6 million hectares, over 20% of all national forest land) of degraded, occupied forest land to the Agricultural Land Reform Office (ALRO, another agency under the Ministry of Agriculture and Cooperatives) by the end of 1993.

The target of 44 million rai announced in the land reform decree was based on estimates of the total area of public forest land occupied or cultivated circa 1990. It was far larger than the amount of land the RFD wished to transfer out of its own control. After the 1989 logging ban, RFD had carried out its own survey and reclassification of forest land, using three categories. Degraded, occupied land where agriculture was being practiced was designated "A" for agricultural land reform. Unoccupied land with some forest cover and potential for either commercial logging or reforestation was designated "E" for economic use. Well-forested land in upper watersheds, parks and sanctuaries was designated "C" for conservation use. RFD completed this reclassification study in 1991. By RFD's reckoning, there were only 7.2 million rai of category A land, i.e. land suitable for transfer to ALRO¹¹ (see Table 1).

¹¹ RFD determined that there were 47 million rai of category E forest land and 82 million rai of category C forest land (see Table 1).

Zoning and forest cover of the national forest reserves, million rai

| | North | Northeast | Central | South | Thailand | % |
|---------------------------------|--------------|--------------|--------------|--------------|---------------|-------------|
| <u>National forest reserves</u> | <u>65.94</u> | <u>34.45</u> | <u>29.59</u> | <u>17.37</u> | <u>147.34</u> | <u>45.9</u> |
| <u>Conservation forests</u> | <u>51.06</u> | <u>12.11</u> | <u>15.46</u> | <u>9.60</u> | <u>88.23</u> | <u>27.5</u> |
| Forests in good condition | 43.52 | 7.94 | 13.30 | 6.80 | 71.56 | 22.3 |
| Forests for rehabilitation | 4.54 | 0.37 | 0.86 | 2.08 | 7.85 | 2.4 |
| Other land uses | 3.00 | 3.80 | 1.30 | 0.72 | 8.82 | 2.8 |
| <u>Economic forests</u> | <u>13.73</u> | <u>20.48</u> | <u>11.60</u> | <u>6.08</u> | <u>51.89</u> | <u>16.2</u> |
| Forests in good condition | 4.58 | 1.80 | 1.53 | 0.91 | 8.82 | 2.8 |
| Forests for rehabilitation | 5.92 | 1.66 | 4.03 | 3.85 | 15.46 | 4.8 |
| Other land uses | 3.23 | 17.02 | 6.04 | 1.32 | 27.61 | 8.6 |
| <u>For land reform</u> | <u>1.14</u> | <u>1.86</u> | <u>2.53</u> | <u>1.69</u> | <u>7.22</u> | <u>2.2</u> |
| Forests in good condition | 0.11 | 0.02 | 0.03 | 0.00 | 0.16 | 0.0 |
| Forests for rehabilitation | .03 | 0.00 | 0.01 | 0.00 | 0.04 | 0.0 |
| Other land uses | 1.00 | 1.84 | 2.49 | 1.69 | 7.02 | 2.2 |
| <u>Outside forest reserves</u> | <u>40.09</u> | <u>71.08</u> | <u>35.35</u> | <u>26.83</u> | <u>173.35</u> | <u>54.0</u> |
| Forests in good condition | 0.00 | 3.86 | 0.33 | 0.70 | 4.89 | 1.5 |
| Forests for rehabilitation | 0.00 | 0.80 | 0.11 | 0.53 | 1.44 | 0.4 |
| Other land uses | 40.09 | 66.42 | 34.91 | 25.60 | 167.02 | 52.1 |

Table 1. Source: RFD (1993c:18).

Under the leadership of Agriculture Minister Suthep, a leading Democrat from the south, the May 1993 Cabinet decree ignored RFD's forest land use proposals and ordered RFD to turn over most category E land as well as category A land for land reform. RFD officials attempted to comply with the order from Minister Suthep. By the end of 1993, they had transferred over 30 million rai of forest lands to ALRO. Because the RFD's own classification process had not always involved ground survey, and because it was being asked to transfer a large area of category E land that abutted category C land without additional survey work, it ended up transferring to ALRO several million rai of well-forested land, and maintaining control over at least 15 million rai of occupied or cultivated forest land (PC10 1996).

The massive and confused transfer of forest land created many opportunities for corruption in the ALRO land certification and titling process that followed. Adding to this confusion, the Cabinet decree of May 1993 authorized ALRO to issue occupancy certificates not only to farmers who could demonstrate that they had been working the land prior to the date of the Cabinet decree, but also to absentee "owners" (including land speculators) who "intended" to farm the land in the future. This provision allowed speculators to gain occupancy rights in precisely the way they had planned in the late 1980s--by hiring farmers to clear the land, claim occupancy, receive occupancy certificates and transfer them to the speculators.

During 1994, the Bangkok press ran many land reform corruption stories, including several that raised questions about Agriculture Minister Suthep's involvement in a case in a reserve forest in southern Thailand. Local residents, the national media and eventually a parliamentary committee accused Suthep of allowing illegal logging in a well-forested area, allowing a rubber planting company to acquire the "degraded" land, and taking a bribe for his assistance. In June 1995, accusations that Suthep had been paid off by one or more of the local actors led to a no confidence vote in Parliament and the fall of the Chuan government (Janchitfah 1996, Ridmontri 1996).

For advocates of forest policy reform, the advent of the Chuan government had created a major political realignment in favor of equity-oriented reformers, particularly those who argued that much of the land under the control of RFD should be reclassified and titled to forest occupants. In practice, however, land reform advocates in farmers' groups and ALRO had relatively little control over the land reform process. Instead, decision-making power remained concentrated in the hands of senior elected politicians. Though these leaders succeeded in initiating the most far-reaching land reform the country had ever seen, they defined and implemented the policy in ways that seriously damaged not only their own credibility, but also the credibility of the equity-oriented advocates.

Partly as a result of the Suthep scandal, public opinion began to turn against further reallocation of forest land to rural residents. Advocates for strict forest conservation gained support from the Bangkok middle class, which doubted the ability of government agencies to manage forest land reallocation without corruption. Under the next government, advocates for the rights of forest occupants and their erstwhile allies in environmental organizations found themselves on opposite sides of the proposed Community Forestry Bill.

E. The Banharn government and the Community Forestry Bill

1. The Banharn coalition: provincializing the status quo

After the fall of the Chuan government in June 1995, elections brought the Chart Thai party back to power at the head of a fractious multi-party coalition, under the leadership of a provincial power broker named Banharn Silpa-archa. In my framework, Chart Thai's return to power was a political realignment in favor of the status quo, but with a twist. Banharn was the first prime minister in Thai history to have spent most of his political career outside Bangkok. The coalition he led favored the interests of provincial patron-client networks more than the interests of the Bangkok-based political and commercial elite (Vatikiotis and Fairclough 1996).

Like the Chatichai government of 1988-91, the Banharn government pursued no clear set of equity, efficiency or environmental goals, though it did promise decentralization of power from Bangkok to the provinces. Its cabinet officials devoted their attention to recouping their election costs by ensuring that their family and friends received lucrative government contracts for construction and services. In practice, decentralization meant giving a greater share of government contracts to provincial than to Bangkok-based firms.

2. Banharn's forest policy initiative: mediating the Community Forestry impasse

Despite the national climate of venality, the Banharn government did take some action in the forest sector that was not motivated only by the pecuniary interests of individual politicians. The Tha Chana forest scandal that brought down Chuan's government had made corruption in the forest sector a national electoral campaign issue. Banharn had promised in his campaign to curb abuses of the national forests, and to increase protection of the country's remaining forests.

After the election, the Banharn government responded to advocates from Bangkok-based environmental NGOs by reviving a Community Forestry Bill that had been trapped in committee for several years. The bill had originally been submitted by the RFD in 1990 in response to pressure from environmentalists after the logging ban. The RFD's bill gave the RFD Director full authority to decide the conditions under which local residents could have access to forests to harvest timber or non-timber forest products (Attanatho 1993). Environmental NGOs advocated for a bill that would give local user groups the authority to make most management decisions,

after approval of their management plan by a provincial committee including RFD, provincial and local government and NGO representatives (Santasombat 1993). Neither the NGOs nor the RFD had been willing to change their position on the bill, and there had been no "green" MP eager to move the bill and take credit for it. Early in 1995 the RFD had tried to break the deadlock by holding hearings on its version of the draft around the country, but NGOs had boycotted the hearings and criticized RFD in the press and in meetings with MPs (PC12 1996; PC14 1996).

The Banharn government agreed to proposals from senior members of the NGO community to call a meeting of RFD and NGO representatives, chaired by the widely respected former head of the National Economic and Social Development Board. At the meeting, the RFD quickly backed down from its previous insistence on full RFD control, and the group reached agreement in principle on the idea of user groups developing management plans (for both conservation and utilization) for approval by a broadly representative provincial committee. Within the NGO group, however, conflict emerged on the question of whether occupants of National Parks and Wildlife Sanctuaries would be allowed to organize user groups. Several of the Bangkok-based environmental NGOs (particularly the Wildlife Federation of Thailand and the Sueb Nakathien Foundation) adamantly opposed the idea of allowing any group to continue living inside National Parks or Wildlife Sanctuaries. Several of the community-oriented NGOs at the meeting (particularly the Program for Ecological Recovery) favored recognizing the occupancy and use rights of those living inside parks and sanctuaries (PC12 1996; PC4 1996).

Having brought the government to the brink of a dramatic shift in authority from the RFD to a far broader and more decentralized set of forest stakeholders, the NGO alliance collapsed. For the rest of 1996, the NGOs debated the merits of allowing current occupants to remain inside national parks and sanctuaries in the Bangkok press, and the revised draft bill languished (*Bangkok Post* 1996).

During 1996, economic growth and foreign investment began to slow, and a variety of personal and party corruption scandals overwhelmed the policy-making capacity of the Banharn government. Though dialogue continued on the community forestry bill, economic malaise and political scandal pushed the legislation off the government's decision agenda. The Banharn government fell in November 1996 without passing a community forestry law.

Analytically, the effort to pass a community forestry law suggests an evolution in the Thai policy making process toward greater pluralism, but also shows the continuing impact of cabinet-dominated policy making on the reform process. For the first time since the formation of the National Forest Policy Committee (NFPC) in 1984-85, the Banharn government convened a group of forest policy stakeholders to negotiate the terms of a proposed reform. Unlike the NFPC, the ad hoc group on the community forestry law included environmental and community-oriented NGOs, as well as government and academic representatives. Though the Banharn government broke new ground in convening and delegating authority to this group, it was unable to follow through on the consensus that emerged. The centralization of legislative power in the cabinet meant that sectoral agreements could only be ratified at the national level, and when national crisis overtook the Banharn government, the momentum created at the sectoral level quickly disappeared.

IV. Conclusion: political and policy turbulence in Thailand

The recent history of Thai forest policy shows the very close connection between national political shifts and sectoral policy changes. On the other hand, it suggests that national political realignments favoring economic, environmental or equity goals do not necessarily translate directly into increased influence for like-minded sectoral advocates. In Thailand, policy-making authority has remained concentrated in the hands of cabinet-level politicians. Sectoral policy advocates have not had well-institutionalized access to senior politicians. Therefore, national political crises and realignments have led to dramatic shifts and reversals in forest policy without a well-informed debate at either the sectoral or the national level.

At the sectoral level, commercial tree plantation investors took advantage of the Prem government's interest in promoting private sector investments and exports to secure low-cost leases to forest land, but the nominally "expert" National Forest Policy Committee never seriously examined the potential trade-offs involved in turning large areas of degraded forest land into commercial plantations. Since 1988, non-governmental advocates for environmental and equity goals have seized on dramatic events such as flash floods, logging and land reform scandals to push for changes in national policy, but they have rarely sought to negotiate those policy changes

with senior officials in the Royal Forest Department or commercial firms with interests in logging or tree plantations. Businesses in the logging and wood products industries have used their informal influence over the RFD bureaucracy and the national government to gain access to forests case-by-case. They were not effectively organized to debate the logging ban, nor have they organized to negotiate the terms of commercial forest policy since the ban.

By the same token, RFD officials have rarely sought to engage NGO or business representatives in policy-making, seeking instead to maintain maximum authority over policies and their implementation. After the logging ban ended the RFD's ninety-year mandate to facilitate and regulate commercial logging, RFD officials reclassified commercial forests for conservation use in order to maintain jurisdiction over them. RFD has continued to resist proposals to delegate some management authority to local user groups, but has not demonstrated its own capacity to manage the current national park system, let alone a much expanded system, in ways that balance the conflicting demands of tourists, environmentalists, local residents and other national agencies (Parr 1994).

The recent history of Thai forest policy does show that national political realignments create opportunities for sectoral policy shifts. On the other hand, in contrast to the Philippines, Thailand's sectoral advocates for efficiency, environmental and equity goals have usually not been well-organized to take advantage of national political realignments. Furthermore, the concentration of decision-making power in the cabinet and the very short-term perspective of most cabinet politicians have made it very difficult for even well-organized advocates to make their case while windows of opportunity are open.

The Thai case suggests that a general framework for tracing the causal links between national politics and sectoral policies must not assume that a well-organized set of sectoral advocates will be ready, willing and able to take advantage of national political shifts. Rather, it suggests that any analysis of the national-sectoral connection must investigate the institutional links between sectoral advocates and national policy makers, not assume them.

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Chapter 6

Initiating Forest Policy Reform: Costa Rica, 1986-96

I. Introduction and summary of the argument

Like reforms in the Philippines and Thailand, forest policy reforms in Costa Rica have been closely tied to political and economic changes at the national level. Costa Rica's national crises have not been as severe, nor its realignments as sharp, as those in the Philippines and Thailand. Consequently, the pace of both national and sectoral policy change has been more gradual.

Historical differences in political and economic institutions help explain the more gradual pace of policy change. Costa Rica has a long history of moderate democratic governance, a relatively productive and equitable economy and a well-developed social welfare system. During the 1980s, an economically and politically turbulent period for Central America, Costa Rica's democratic institutions and the moderate strategies adopted by its political leaders allowed the country to escape serious domestic unrest. Though the country did face a debt crisis in the early 1980s and suffered several years of acute recession, its political leaders managed to create a national consensus in favor of austerity and economic liberalization without drastic cuts in the health, education and insurance programs that served most citizens.

Nevertheless, Costa Ricans did define their economic plight in the early 1980s as a crisis, and the country went through a clear cycle of decline and renewal from the beginning to the end of the decade. During the administration of president Luis Monge (1982-86), Costa Rica's government focused on macroeconomic stabilization and trade liberalization. Sectoral reforms, including reforms in the forestry sector, became more important under presidents Oscar Arias (1986-90), Rafael Angel Calderon (1990-94) and Jose Maria Figueres (1994-98).

Each of the latter three presidencies represented a significant political realignment at the national level. Arias came to office at a moment when the worst of the economic crisis had passed, thanks to the preceding administration's acceptance of stringent fiscal, monetary and trade policies demanded by the IMF and the World Bank. Representing the Partido Liberacion Nacional (PLN), the same equity-oriented party that had held the presidency in the previous administration, Arias came into office constrained by the need to maintain economic austerity and

promote efficiency, but empowered by a national consensus that equity goals should receive greater priority in order to mitigate the impacts of austerity on the poor. The Arias administration also broke new ground by making environmental conservation a national priority co-equal with equity and efficiency. Inspired by the concept of "sustainable development" that was coming into vogue at the international level, and by the opportunity to deal with some of the country's debt burden by using "debt for nature swaps" to fund the country's vaunted national parks system, Arias and his Minister for Natural Resources launched several innovative environmental programs.

If the Arias administration represented a realignment in favor of equity and environmental protection, its successor, the conservative administration of Rafael Angel Calderon, put the country back on the efficiency-oriented path it had begun walking under duress in the early 1980s. Though he acknowledged the need to share the benefits of economic recovery with the country's poorer citizens, Calderon and his Partido Unidad Social Cristiana (PUSC) championed deregulation and privatization as the best strategy for promoting Costa Rica's long-term economic health. He urged the use of market incentives in many sectors, including forestry, and significantly reduced the government's commitments to achieving equity and environmental goals.

In 1994 the PLN regained the presidency under the leadership of Jose Maria Figueres, a young technocrat whose father had been the founder of the country's welfare state and a three-time president. Figueres, like Arias, sought to slow the pace of economic liberalization and re-establish the legitimacy of state control of key economic institutions, but he was more willing than Arias to use economic incentives along with public ownership and regulation to achieve policy goals. Riding a wave of economic growth, he was also able to spend more on social welfare commitments without significant increases in taxes, interest rates or inflation.

Each successive administration changed the relative priority of economic efficiency, social equity and environmental protection goals at the national level. These national political realignments had both direct and indirect impacts on forest sector policies. Most directly, each administration proposed forest sector policy reforms that reflected its broader priorities and the interests of its key constituencies. Indirectly, the changes in administration affected the strategies and resources of status quo beneficiaries and advocates for reform in the forest sector.

Though national political realignments help explain much of the timing and content of forest policy reform initiatives, sectoral and international factors are also critical to understanding the reform initiation process.

At the sectoral level, initial conditions help explain the content of policy reforms. As the reform process began in the mid-1980s, environmental advocates were far better organized and better represented at the sectoral level than either status quo beneficiaries or advocates for efficiency or equity goals. They took advantage of the Arias administration's demonstrated concern for environmental protection to frame deforestation as an environmental crisis that could best be addressed by strengthening the country's system of protected areas. Nevertheless, they recognized that they could not succeed in their forest protection goals without the cooperation of small farmers living in and around the country's parks and protected areas. Consequently, the initial focus of reforms was on reducing incentives for forest conversion and strengthening the national parks system, not on promoting sustainable harvesting or on increasing access for the rural poor.

In the mid-1980s, at the beginning of the reform period, Costa Rica's forest industries were small, fragmented and not particularly well-run. The major groups of status quo beneficiaries were ranchers and small-scale farmers who had gained land under a de facto open access policy for public forest lands, and large corporations that had benefited from reforestation tax credits. Though these groups might have posed a challenge to policies designed to slow deforestation, small-scale farmers were not politically well-organized enough to do so, and the ranching industry was in economic decline and not seeking new lands.

The evolution of political strategies and capabilities among sectoral actors helps explain variation in the success of reform initiatives. Over the period of this study, the country's forest industries and small farmer groups became better organized to represent their interests in the forest policy debate. Reacting to the strong regulatory thrust of the Arias administration's reforms, the forest industries challenged several of them in court, and also lobbied the National Assembly for deregulation of most commercial forestry activities. When the Calderon administration came into office, the forest industries took advantage of the national political realignment to block additional regulations, and to shift the focus of the policy debate from

restrictions on forest cutting by private landowners toward economic incentives for private owners to practice sustainable forest management.

Smallholder representatives first became engaged in the forest policy debate as a result of reforestation programs initiated under the Arias administration. They became better organized during the Calderon administration and formed alliances with both environmental representatives and forest industry representatives to gain additional reforestation funds and natural forest harvesting rights.

At the international level, environmentalists' support for protection of Costa Rica's forest helped make the country the world's leading beneficiary of debt-for-nature swaps. Early and strong international support for forest conservation added to domestic environmentalists' "first mover advantage" in domestic forest policy debates. Not all international actors advocated environmental reforms, however. Several European bilateral aid agencies whose primary concern was to improve standards of living for the rural poor encouraged the Arias administration to involve small farmers in forest protection. They invested substantial resources in equity-oriented reforestation and forest management programs, and helped smallholders organize to represent their interests in the forest sector. During the Calderon administration, efficiency-oriented foresters and rural development staff in bilateral and international aid agencies began to advocate for more productive use of the country's forests, and to support political organizing by the country's forest industries.

By the end of the period of this study, the see-saw between conservation and commercial use of Costa Rica's forests had nearly balanced. With help from international actors, the forest industries had overcome some of their internal divisions, and the rising value of timber from the country's dwindling productive forests had made new investment economically attractive. Conservation advocates had also begun to see advantages in using incentive-based rather than strictly regulatory policies to promote forest conservation, and smallholders were increasingly interested in managing forests and marketing their own timber.

In sum, Costa Rica's reform episodes clearly illustrate how the key causal influences posited in this thesis--national political circumstances, the political strategies and resources of sectoral status quo beneficiaries and reform advocates, and the commercial value of forest resources--interact to shape the timing, content and success of reform initiatives. Costa Rica's

story also suggests that moderate national political realignments and relatively well-matched political resources among sectoral advocates can contribute to integration of economic, environmental and equity goals, by avoiding dramatic swings from one macro-objective to another and by encouraging negotiation among advocates for potentially competing objectives.

Costa Rica has by no means achieved full integration of economic, environmental and equity goals in its forest policies. Still, the sectoral, national and international actors who have shaped policy over the last decade do appear to have learned some important lessons about feasibility and desirability of policies that minimize trade-offs and maximize complementarities among these goals.

The following sections sketch the historical background to recent reform attempts (section II), analyze reform initiatives under Arias, Calderon and Figueres (section III), and review ways in which the Costa Rica case supports and qualifies this dissertation's arguments about reform initiation (section IV).

II. Historical Background

A. Settlement, land use and deforestation in the postwar era

Historically, Costa Rica's government has treated forests primarily as an obstacle to the development of agriculture and ranching, rather than as a source of timber and political patronage. More than 60% of Costa Rica's territory (3.4 million of 5.1 million hectares) was forested as recently as 1950 (World Bank 1993d: Annex 3, p.1), and two thirds of its population was concentrated in the fertile Central Valley around the capital city, San Jose (Leonard 1987: 39). At the beginning of the postwar period, coffee growers had cleared much of the montane forest on the hills around the Central Valley to plant coffee trees; American fruit companies had cleared a small portion of the lowland tropical forest on the Caribbean coast for banana plantations; and farmers had also cleared forest bordering the drier Pacific coast to plant annual crops (corn, sugar, cotton and rice). Most of the hilly central regions of the country were not suitable for agriculture; they were still sparsely populated and well-forested in the early 1950s (Leonard 1987: 102-104).

Though the pace of deforestation in Costa Rica since 1950 has been rapid, deforestation has not been driven by a Southeast Asian-style logging industry. Costa Rica never experienced a

timber boom: the forest industries accounted for no more than 1 percent of GDP and 2 percent of exports during the period from 1950 to 1985 (Peuker 1992: 3). Rather than attracting a cadre of timber barons, Costa Rica's forests have been cut and converted by successive waves of small-scale loggers, landless migrants, banana companies and cattle ranchers. By some estimates, more than 90% of all the wood cut in Costa Rica's forests has been burned or left to rot during the process of land clearing (Cruz et al. 1992: 50-51).

As Costa Rica's population grew during the postwar era, out-migration from the densely populated Central Valley increased, and migrants cleared forests for farmland. Population increased rapidly during the postwar years, from 1 million in the mid-1950s to 2.6 million in 1985, an average annual rate of more than 3 percent (Céspedes and Gonzalez-Vega 1993: 17). By 1980, population density was 53 per square kilometer, the third highest in Central America. Density per square kilometer of cultivated land was 551 persons, second only to El Salvador's (Leonard 1987: 41). The search for agricultural land contributed directly to deforestation. Migrants from the Central Valley moved into forested areas, cleared and farmed them, and moved on when the land's productivity dropped (Cruz et al. 1992: 66).

When population density and inequality of land holdings increased in the Central Valley, the government began to see colonization of forest lands as a politically attractive alternative to land reform. The 1942 Squatters Law and the 1961 Agrarian Reform Law allowed the landless to claim public land and "underutilized" private land if they could prove that they had cleared the land of forest, occupied and farmed it for one year (Cruz et al. 1992: 52, 54).

During the 1960s and 1970s, cattle ranching became an additional force driving deforestation. As North American demand for beef increased, Costa Rica became a leading supplier. Pasture land increased from 19 percent of total land area in 1960 to more than 33 percent in 1980 (Leonard 1987: 99). Encouraged by subsidized credit for the purchase of cattle,¹ and by low land prices (squatters continually augmented the supply by clearing, claiming and reselling public land), ranching developed through extensification rather than intensification (Leonard 1987: 90).

¹ Through the early 1980s, most of Costa Rica's domestic banking industry was controlled by state financial institutions. From 1956 to 1982, cattle ranching's share of state-controlled credit rose from 14 percent to 23 percent. At its 1982 peak, cattle ranching received half of all state-controlled credit for the agricultural sector, though ranching accounted for less than 10 percent of agricultural GDP (Peuker 1992: 21).

In short, the abundance of the country's forests and their timber meant that forests were not treated as a scarce resource. The government actively encouraged forest clearing for agriculture and ranching. Moreover, the government's lenient attitude toward squatters on public forest lands encouraged "professionalized squatting" by migrants who cleared public land, claimed it, farmed it until its productivity dropped, and then sold it to ranchers or land speculators (Cruz et al. 1992: 52).

The net effect of population growth and migration, extensive farming and ranching, and government policies that discouraged forest conservation was rapid deforestation. From 1950 to 1985 Costa Rica lost roughly 2 million of its initial 3.4 million hectares of forest. The annual area deforested probably peaked during the 1960s at 50-60,000 hectares per year and slowed in the 1970s. Deforestation picked up again during the economic crisis of the early 1980s as a fresh wave of migrants from the Central Valley sought land for subsistence agriculture (World Bank 1993d: Annexes 3, 4) (see Table 1 and Figure 1).

| | 1965 | 1975 | 1985 |
|-------------------|------|------|------|
| Total Land Area | 5.1 | 5.1 | 5.1 |
| Permanent Pasture | 1.1 | 1.6 | 2.3 |
| Agricultural Land | 1.5 | 2.1 | 2.8 |
| Forest Land | 2.9 | 2.2 | 1.6 |

Table 1: Land use in Costa Rica (in million hectares), 1965-1985. Source: FAO (1989).

B. National responses to deforestation

National concern about the pace of deforestation grew during the late 1960s, as migrants began to clear forests in areas where forests had substantial potential for wood production; on hilly lands unsuitable for agriculture; and on the borders of national parks. In response, the Legislative Assembly passed Costa Rica's first Forestry Law in 1969. The law established the General Directorate of Forestry (DGF) to regulate forest harvesting and clearing on both public and private lands, and to demarcate public forests into production, protection and park areas (Roman 1986: 35). The government did not see fit, however, to give DGF sufficient staff or budget to

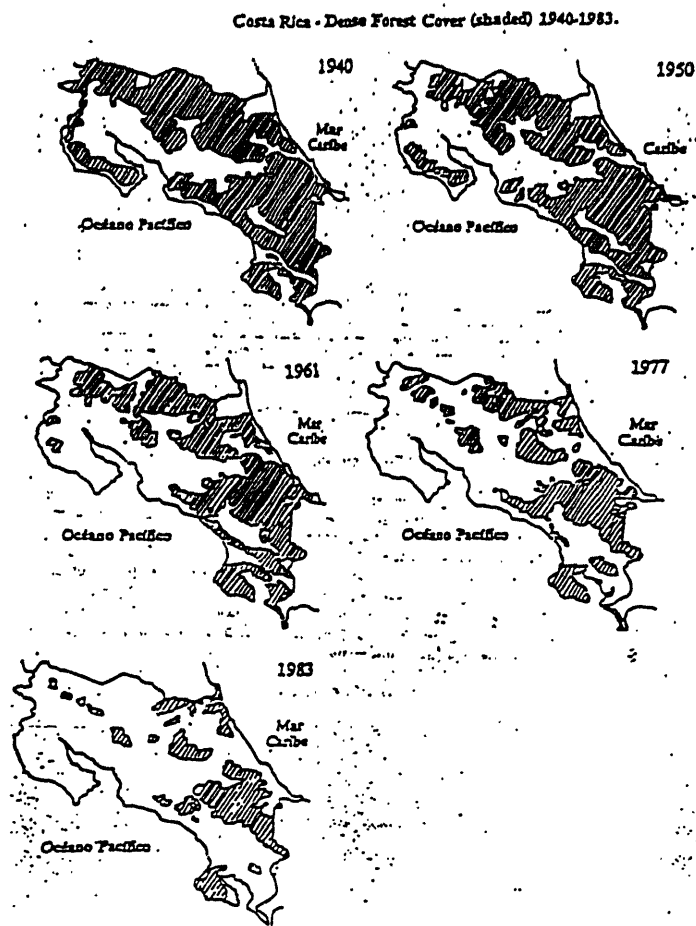


Figure 1. Source: Carriere (1991: 189).

carry out its mandate. Too poorly staffed to supervise the use of public or private forest lands, DGF had little impact on forest management decisions (Peuker 1992: 13-15).

The 1969 law also attempted to eliminate the provision of the 1961 Agrarian Law that had allowed squatters to claim public lands by clearing their forest cover. In practice, however, the Agrarian Development Institute (IDA) continued to grant transferable rights to both authorized land colonists and squatters who could show they had farmed the land, regardless of whether they had deforested it or not (Cruz et al 1992: 53; Peuker 1992: 9-10).

In the early 1970s, Costa Rica was also influenced by growing international awareness of and concern about the environmental values of tropical forests. In 1977 the government established the National Parks Service (SPN) within the DGF. The SPN's mandate was to

establish new parks in the country's remaining forested areas and to manage them for environmental protection and recreation (Roman 1986: 40). During the 1970s the park system expanded substantially, to cover roughly ten percent of the country's land area in 26 parks, wildlife reserves and recreation areas. Most of this land was forested.

Despite relatively early and strong domestic support for nature conservation, the national park system was not notably well-managed. The Legislative Assembly was more inclined to pass laws establishing new national parks than to fund acquisition of private land within their boundaries or the salaries of SPN staff to monitor and maintain them. Exacerbating the problem of private lands within park boundaries, rumors that a national park might soon be established around their property often led private landowners to clear and claim adjacent public lands. When economic crisis hit the country in the early 1980s, the SPN budget was one of the first to be cut, further undermining forest protection efforts (Umana and Brandon 1992: 86-87).

C. Economic crisis and deforestation in the early 1980s

Economic crisis hit Costa Rica along with the rest of Central America in the early 1980s. The country's heavy debt burden and deteriorating terms of trade forced it to undertake stabilization and structural adjustment. The government of President Monge, elected in 1982, began reducing the number and scope of state social welfare programs and subsidies for domestic producers. The intensity of the crisis drove Monge to carry out these reforms despite the fact that his party, the Partido Liberacion Nacional, represented the interests of the groups most threatened by adjustment: government workers, state-controlled enterprises and protected industries (Céspedes and Gonzalez-Vega 1993: 142-43).

Thanks to its relatively high level of income prior to the crisis and its continuing access to international credit, Costa Rica was able to weather the first stage of the adjustment process without grave social unrest. Nevertheless, the decline in beef and banana exports to developed countries during the early 1980s imposed substantial hardship on rural producers. Many farm and ranch workers who lost their jobs returned to subsistence cultivation, clearing land on what remained of the country's agricultural frontier. Some displaced urban workers also returned to the countryside, reversing a twenty-year pattern of rural-to-urban migration (Cruz et al. 1992: 62-67).

The renewed pace of forest clearing during the 1980s led to deforestation rates that were among the highest in the world. Both private forest lands and forested public lands became targets for clearing by migrants. Private landowners responded vigorously; some protected their lands at gunpoint. The government, constrained both by a policy history that encouraged the poor to "improve" public lands by clearing and farming them and by its minimal coercive capacities, did less to protect public lands. As a result, large numbers of migrants began to clear government-controlled forest land, including areas inside the country's national parks. Despite the Monge government's reluctance to evict settlers on public lands, it decided that it had to draw a line to protect the well-developed national park system against encroachment.² After hundreds of displaced banana plantation workers invaded Corcovado National Park to mine gold deposits in 1985, the Monge administration began intense negotiations with their representatives (Umana and Brandon 1993: 87, 91).

III. Costa Rican Forest Policy Reform Initiatives, 1986-96

A. The Arias Administration, 1986-90

1. The national context for reform: a political realignment favoring equity and environmental goals

During the 1985-86 Presidential and National Assembly campaigns,³ the situation in Corcovado and other land conflicts became linked to a broader debate on the pace and scope of structural adjustment. Oscar Arias, the candidate of the social democratic Partido Liberacion Nacional (PLN), faced a difficult electoral challenge. To maintain support from his own party's core constituencies (public sector workers and urban professionals), he had to distance himself from the austerity policies of the head of his own party, President Luis Monge. At the same time, he had to maintain support from Monge and his supporters within the PLN, and reassure Costa Rica's creditors and its domestic business elite that he would not make any major detours from the path of structural adjustment.

² Costa Rica's national parks were a major attraction for both domestic and foreign tourists, and foreign tourism was the country's third-largest foreign exchange earner after coffee and bananas. Since the early 1990s tourism has surpassed both of these exports to become the country's top source of foreign exchange (EIU 1993b).

³ Elections for the Presidency and the Legislative Assembly are held in February every fourth year.

In a carefully crafted platform, Arias promised to moderate the pace of structural adjustment, find new employment for the rural poor, and integrate nature conservation with sustainable rural development. Arias' campaign also benefited from the fact that the opposition Partido Unidad Social Cristiana (PUSC) had also supported structural adjustment and was more closely identified with landed wealth than the PLN. Arias won election with a slim (51 percent) majority.

The Arias victory was a political realignment favoring both social and environmental goals. Nevertheless, Arias faced opposition in the Legislative Assembly (both from more centrist members of his own party and from the PUSC and associated right-of-center parties) to major changes in the course of structural adjustment. Recognizing the limits of his popular mandate, and continuing the moderate tradition of Costa Rican democracy, Arias did not attempt dramatic reversals of structural adjustment policies. Instead, he sought to slow the pace of adjustment and provide compensatory programs for small farmers.

Arias also brought environmental and natural resource conservation to the top of the government's agenda for the first time in Costa Rican history. Immediately after his election, Arias announced that the Ministry of Energy and Mines would become the Ministry of Natural Resources, Energy and Mines (MINEREM), with responsibility for balancing conservation and sustainable use of the country's natural resources. He appointed a well-respected conservationist, Alvaro Umana, to head the new agency. Faced with an opposition-controlled Assembly that refused to establish the new Ministry by law, Arias created the agency by decree. He and Umana then used their executive powers to transfer the Directorate of Forests (DGF) and the National Parks Service (NPS) from the Ministry of Agriculture to MINEREM (Umana and Brandon 1993:89-91).

2. Forest sector actors during the Arias administration

Status quo beneficiaries and their political resources: Arias' election, the creation of MINEREM and its absorption of DGF, the national forestry agency, raised concern among the organized interests who had benefited from the exploitation of Costa Rica's forests and their conversion to other uses. Under Costa Rica's 1969 Forestry Law, private owners of forested land had to gain a permit from the DGF to log the forest or convert it to other uses. The DGF

routinely granted permits for conversion of private forest to other uses, with little or no attention to the potential environmental impacts of conversion. The DGF also had responsibility for managing State Forest Reserves, had the authority to permit their conversion to non-forest use, and routinely did so. In fact, the 1969 Forestry Law did not recognize deforestation as a problem in any sense; it only indicated that the DGF should take into consideration possible environmental impacts in making its permitting decisions (Porras and Villarreal 1986: 38-43).

Under a 1979 law, the DGF also had the power to certify reforestation tax credits for private landowners. The law, passed at a time of growing Costa Rican public concern about the impacts of deforestation, gave private landowners a credit of up to \$1,500 per reforested hectare. For most degraded rural lands, this tax credit was substantially higher than the sale value of the land.⁴ The credit could only be used against tax liabilities, however, so it was little good to small farmers who paid little or no tax. Instead, the reforestation credit was used most by commercial firms and wealthy individual landowners to reduce tax liabilities. DGF certified the credit after inspecting the reforestation site. There was no mechanism for ongoing monitoring to verify tree survival, and therefore no way to make the tax credit conditional on tree survival. Consequently, there was no incentive for those who took advantage of the tax credit to make sure their plantations survived (Dudenhoffer 1990e).

By 1986, DGF had exercised its permitting and land conversion power for twenty-five years, and had controlled reforestation credits for fifteen. Over the years, DGF had developed a diverse constituency of loggers, wood-based industries, wealthy agricultural landowners, managers of commercial plantations, and private firms with an interest in the reforestation tax credit (Umana and Brandon 1993: 90). In the mid-1980s, there were three associations representing these constituencies: the Chamber of Forest Producers (for loggers), the Chamber of Forest Industries (for wood-based industries) and the Chamber of Reforesters (representing those who benefited from reforestation credits and commercial wood plantations) (Dudenhoffer 1990d,e,f).

The interests of these constituencies were not, however, completely harmonious. Loggers and plantation owners wanted to keep the prices of wood high, while sawmill owners and wood products firms wanted low prices. Firms set up to log natural forests and small plantations were

⁴ Lutz et al. (1993: 20) report an average agricultural land value of \$1,200/ha, with a range from \$460 to \$2,300 in areas with a high concentration of banana plantations.

in competition with commercial plantations for customers (at least in the hardwood market; softwood plantations which produced for pulp and paper mills faced less competition from natural hardwood forests). The country's few integrated wood production companies, which owned both natural and plantation forests and managed them for long term supply, competed with the large number of smaller sawmill and wood products firms (Lutz et al. 1993: 9-14).

Furthermore, the wood industry's production had averaged only 1% of GDP and less than 2% of exports over the previous 25 years, and its contribution to both was dropping (World Bank 1993d: 2; Kishor and Constantino 1996: 3-4). The long-term rise in forest harvesting costs as the country's easily-accessible forests disappeared, combined with the economic slump of the early 1980s, was driving many smaller logging companies and sawmills out of business at the time the Arias administration came to power. Even integrated wood products companies with plantation forests were suffering (Dudenhoffer 1990d). Finally, the forest industries were more closely tied to the opposition PUSC than to Arias' PLN, so they had only limited political influence with the incoming Arias administration (Cespedes and Gonzalez-Vega 1993: 23-25).

Outside the forest sector, a second set of status quo beneficiaries were the large ranchers and banana plantation owners who bought deforested land.⁵ Like the forest industries, the ranching and banana industries were hard-hit by the fall in exports during the early and mid-1980s.⁶ The large ranching and banana firms were also more closely allied to the PUSC than the PLN. Because they were major economic actors, the ranchers and banana plantation owners had supporters in the PLN as well as the PUSC. Nevertheless, they had less leverage over President Arias than over his predecessor President Monge, who had to support export industries to deal with the balance of payments crisis (Cespedes and Gonzalez-Vega 1993: 23-25).

The final group of status quo beneficiaries, the landless *campesinos* who cleared forest land to farm and to sell, was the most numerous but the least organized and the least politically influential. Costa Rica's Agrarian Law made it possible for "*precaristas*" (squatters on public and

⁵ In most cases, ranch and plantation owners did not purchase forested land and clear it themselves. Rather, they bought land from *campesinos* who had "improved" it by removing tree cover, gained occupancy certificates from the Instituto de Desarrollo Agrario, and sold their claims when the land's productivity dropped (Dudenhoffer 1990g; Leonard 1987: 123-25).

⁶ The ranching industry faced additional difficulties during this period as environmental groups in the U.S. began to publicize "the hamburger connection"--the expansion of cattle ranching in Central America to provide inexpensive hamburger meat for U.S. fast food chains, at the expense of forests and the landless. Several hamburger chains stopped importing Costa Rican beef to end boycott campaigns by environmental groups (Dudenhoffer 1990a).

private lands) to gain transferable rights to public lands outside protected areas by "improving" them, i.e. deforesting and farming them. As noted above, the numbers of *precaristas* swelled during the early 1980s, as the jobless left the cities and found that the agricultural frontier no longer existed, except inside the borders of the country's protected areas (Cruz et al. 1992: 62-67). According to one widely cited estimate, in 1983 one in six rural families were *precaristas* (Dudenhoffer 1990g). Though they were not politically well-organized, their interests were represented by left-wing campesino associations, the left wing of the PLN and the Agrarian Development Institute (IDA) (Carriere 1991: 196-197). Their interests were also recognized by the PLN and its new leader Oscar Arias, who had promised to improve living conditions for the landless.

In short, the incoming Arias administration, which had declared its commitment to protecting the country's remaining forests and its national park system, faced potentially serious opposition from those who had benefited from status quo forest exploitation and conversion policies. Although the forest-dependent industries were not united, and the ranching and banana industries were on the defensive, they commanded substantial economic resources and had the support of the opposition in the Assembly. The landless, whose lot Arias had promised to improve, might also mobilize against attempts to relocate them or curtail their forest clearing activities.

Reform advocates: Like status quo beneficiaries, reform advocates represented diverse interests and were not particularly well-organized at the beginning of the Arias administration. Advocates for environmental protection were the best-organized and most influential constituency, with supporters at the highest levels of government, and in national and international NGOs. In broad terms, the environmentalists sought to protect the country's national park system and to increase protection of forested areas outside the parks. Improving economic efficiency in the forest industry and ensuring equity in the use of forest resources were secondary goals.

Within the government, key reform advocates with a strong environmental orientation included President Arias, Dr. Alvaro Umana, the incoming Minister of the new Ministry of Natural Resources, Energy and Mines, and the staffs of the National Parks Service and the National Wildlife Service. Their domestic supporters included the leaders of Costa Rica's major environmental groups, and the leaders of several tropical ecology research centers located in the

country's universities and in autonomous, internationally-funded institutes.⁷ Though the country's tourism industry was not initially an active proponent of forest policy reforms, it stood to benefit from greater protection of the national parks system (as long as environmental reforms did not reduce access to the national parks). Internationally, several environmental NGOs also advocated for protection of Costa Rica's parks system and its forests, both for their natural beauty and for their contribution to global biological diversity.⁸

The proponents for economically efficient commercial forestry were less well-organized and generally less influential than environmentalists in the incoming administration. They included owners, managers and investors in the larger, vertically integrated wood products firms, and a small cadre of national and international forestry experts (Dudenhoffer 1990d; Roman 1986).

As noted above, Costa Rican government policies on land occupation already favored the interests of the landless by giving them the right to occupy, clear and farm forested areas. Therefore the landless were a potential source of opposition to environment- or efficiency-oriented reforms that might reduce their access to forests, not a constituency for equity-oriented reforms. Indigenous peoples, another group which might have been expected to play a significant role in advocating for equity-oriented reform, had already secured legal rights to their ancestral lands, and did not play an active role in the forest policy reform debate (World Bank 1993d: 14).

Instead, the leading advocates for equity in the forest sector were small-farmer associations that wanted reforestation incentives redirected to benefit them. The leaders of these associations complained that their members could not benefit from the generous tax credits offered to large firms, since they earned too little to pay income tax (Alpizar 1993).

Neither status quo beneficiaries nor reform advocates were particularly well-organized to affect the policy process as the Arias administration took office in May 1986. Nevertheless, their concerns did create a well-defined set of priorities and constraints for senior policy makers. It

⁷ The major environmental groups were the Costa Rican Association for Nature Conservation (ASCONA) and the National Parks Foundation. The tropical ecology research centers included those at the University of Costa Rica, the Centro Agronomico Tropical de Investigacion y Ensenza (CATIE, internationally-funded), Fundacion Neotropica and Organization for Tropical Studies; the last two were predominantly funded by U.S. universities and NGOs (Carriere 1993: 197).

⁸ Costa Rica's forests were widely recognized for their diversity of plant and animal life. See e.g. Hartschorn et al. (1984). International NGOs that advocated for forest protection or helped with financing included IUCN, The World Wildlife Fund, Conservation International and The Nature Conservancy (World Bank 1993d: 15).

was already clear that the administration's main goal in the forestry sector would be to increase protection of Costa Rica's forests without imposing undue hardship on *precarista* squatters. Protecting the economic interests of the wood, ranching and banana industries was less important to the incoming administration, though the need to increase agricultural export earnings was an important constraint on forest policy development.

3. The Arias administration's reform initiatives

During the first year of Arias' term, the administration proposed a number of potentially far-reaching forest sector reforms. The proposals were developed by senior officials in the nascent environment and natural resources ministry, in consultation with sectoral advocates. They reflected the strong influence of advocates for environmental protection, the less developed but still significant influence of advocates for equity, and the weak influence of advocates for economic efficiency.

The administration's environment-oriented proposals were

- a new national forestry law making unauthorized deforestation a criminal offense, increasing regulation of the commercial sector, and abolishing a law that had allowed farmers to gain transferable rights to public and private forest lands by clearing tree cover;
- bans on the export of logs and sawnwood;
- creation of a new Ministry of Natural Resources, Energy and Mines (MINEREM), to consolidate the agencies responsible for forest management and develop a strategic plan for conservation of forests and other natural resources; and
- consolidation of the national parks into a National Protected Areas System (SINAP), with new investments in forest protection, and purchase of private land inside SINAP areas, largely supported by foreign grants and debt-for-nature swaps, and by the national forest trust fund

Its equity-oriented proposals were

- new grant and loan programs to give small farmers incentives to reforest private land; and
- investment in integrated conservation and development projects for rural residents in SINAP buffer zones.

Its efficiency-oriented proposals were

- higher stumpage fees for commercially harvested timber, to be deposited in a Forest Development Fund for reforestation and forest protection;
- rationalization of the processing industry, through a penalty fee for wood processed outside the region in which it was harvested, a moratorium on new sawmills, and incentives for existing sawmills to purchase forests and manage them sustainably for wood supply; and
- increased efforts to verify large firms' claims for reforestation tax credits, and introduction of a new reforestation bond which would only be paid upon evidence of plantation survival.

These proposals strongly favored environmental goals; they sought to take advantage of foreign support for environmental protection by seeking foreign aid for environmental investments; they did not favor efficiency goals; and they cut against the interests of private commercial firms (with the partial exception of wood-using firms, which would benefit from the log and sawnwood export ban but not from tighter restrictions on logging (cf. World Bank 1993d: 33)).

The content of the proposals reflected the national and sectoral political context sketched above. The proposals were developed by acting Natural Resources and Environment Minister Umana and other senior MINEREM officials in consultation with government agencies, NGOs and private firms (Umana and Brandon 1993: 88-90). Though there was relatively broad participation in the process, the resulting proposals clearly reflected the dominant influence of environmental advocates in the sector, and the relatively weak influence of advocates for other goals. They also reflected the national political context of austerity--most new investment funds were to come from foreign funders. Finally, they reflected the limited influence of private commercial firms, who stood to lose the most if the reforms were enacted.

As the Arias administration began to move the proposals through the Legislative Assembly, status quo beneficiaries began to organize to oppose them. As the propositions on reform initiation would suggest, sectoral reform proposals that were consistent with national political circumstances and which had strong support from both sectoral and national actors were more likely to pass than those which had only sectoral support. The strong influence of national circumstances is clear from the fact that a number of reform proposals which were opposed by important sectoral actors still passed because they had national political support. Among the

proposals with strong national support, only those that imposed substantial costs on well-organized sectoral actors were blocked before enactment or challenged in the courts after enactment.

Creating MINEREM and SINAP; restricting logging and land clearing:

Environmental protection was the administration's top priority, and was also supported by public opinion and by most members of the Legislative Assembly. Among the administration's environmentally-oriented proposals, the new forestry law (including tighter regulation of the commercial logging industry, a ban on log exports and the elimination of provisions that allowed the landless to gain land rights by clearing forests) cleared the Assembly in 1986 and the first half of 1987. The proposal for consolidating the national parks into a national protected areas system (SINAP) also moved forward without substantial opposition. The only proposal that met serious initial resistance was the attempt to create a new Ministry of Natural Resources, Energy and Mines.

Arias sent a strong signal of his environmental commitment by submitting the new forestry law to the Assembly in the first week of his administration. Logging firms and sawmill owners opposed the provisions of the new forestry law that tightened harvesting, transport and processing regulations. The industry was split, however, by the provision of the law that banned log exports. Logging firms opposed it but sawmills and wood product manufacturers supported it. Lacking well-positioned champions at the national level, and internally divided over the log export ban, the wood producers were not able to block passage of the law (Dudenhoffer 1990b).

Along with tighter restrictions on commercial logging, the new law also attempted to restrict land clearing by the rural poor. It annulled provisions in the 1961 Agrarian Act that had allowed farmers to claim land that had less than 50% forest cover without proof of ownership.⁹ *Precaristas* and others who cleared public land without written permission could now be prosecuted and imprisoned. Though the rural poor were potentially hurt by the new law's restrictions on forest clearing, they were not effectively organized to oppose its passage.

The Arias administration's key institutional reform, the creation of the Ministry of Natural Resources, Energy and Mines (MINEREM), ran into strong opposition from a coalition of

⁹ The new law did not, however, fully eliminate incentives for *precaristas* to occupy, clear and sell public forest lands. *Precaristas* could still clear land and sell it informally to others. Armed with a bill of sale, the purchaser could still apply for land rights acquired "in good faith" (Peuker 1992: 9-10).

conservatives in the National Assembly and private firms in the forest sector. At the national level, conservatives in the Assembly viewed the creation of a new Ministry as an unwarranted expansion of government power at a time when the overriding national priority was to reduce the role of government in the economy. At the sectoral level, private firms feared that the consolidation of forest regulatory powers in an environmentally-oriented ministry (Umana and Brandon 1993: 90).

Rather than using up political capital to gain the legislature's agreement on MINEREM, Arias created the Ministry by issuing a Presidential Decree. The decree expanded the mandate and authority of the existing Ministry of Energy and Mines to include conservation and management of the environment and natural resources. He named Umana as Acting Minister. Together with Arias, Umana used his executive authority to transfer the Directorate General of Forests and the National Parks Service to MINEREM.

Once ensconced in MINEREM, Umana and his team began implementing their top priority: consolidation of the national parks into a unified national protected areas system (SINAP). MINEREM officials and their allies in domestic and international environmental NGOs and research institutions recognized that the national park "system" in Costa Rica, though impressive in its coverage (it included roughly 13% of the country's area), was in jeopardy from without and from within. Land hungry farmers were encroaching on the outer margins of most of the country's parks. Within the outer boundaries of most parks, private individuals and corporations owned from 10 to 30 percent of the land.¹⁰ They retained the right to develop this land in ways that were incompatible with environmental objectives (e.g. by removing tree cover, burning land at the beginning of the planting season, applying fertilizers and pesticides). Furthermore, the occupation of Corcovado National Park by gold miners in 1985 dramatized the ease with which individuals and groups could overwhelm the government's capacity to guard the parks (Umana and Brandon 1993: 89; Peuker 1992: 11-13).

Umana and his supporters planned to use the emerging conservation strategy of identifying top priority areas for protection based on their biological diversity and natural beauty, and

¹⁰ The patchwork of owners was the result of the way the parks were usually created in Costa Rica. The National Parks Service and the Legislature had usually decreed the boundaries of parks in order to prevent further land acquisition within their borders, but had rarely had sufficient funds to buy existing privately owned land within park borders (World Bank 1993d: 13, Annex 8).

surrounding these "core" protected areas with mixed-use "buffer zones." To ensure protection of the core areas and effective management of the buffer zones, MINEREM needed a substantial increase in funding. Funds were to support purchase of privately-owned lands within the parks, additional park staff for the National Parks Service, and investments in agroforestry projects and other non-destructive activities for people living in buffer zones. Given the government's budget constraints, only a small amount of funding could come from the treasury.

With a great deal of international lobbying by Umana and his allies, Costa Rica was able to secure substantial foreign funding for its parks. As Jacobeit (1996: 135-140) points out, Costa Rica was ideally placed to take advantage of debt-for-nature swaps during this period. It had substantial foreign commercial debt, highly discounted because of the government's past caps on debt service payments, one of the most well-respected parks systems in the developing world, a strong and credible government commitment to environmental conservation, and a well-organized set of environmental NGOs.

From 1988 to 1990, the Costa Rican government and international donors repurchased nearly \$80 million in Costa Rican commercial debt for roughly 15% of its face value.¹¹ The Costa Rican Central Bank converted this debt into local currency and dollar-denominated bonds at an average of 50% of face value, generating an endowment of \$40 million for environmental protection, nearly twenty times the annual budget of the National Parks Service (SPN). Of the \$40 million endowment, a Costa Rican NGO, the National Parks Foundation, received roughly \$22 million, which it used to buy land and hire guards for several national parks. MINEREM received roughly \$10 million to establish a reforestation loan fund for small farmers living in national park buffer zones. The remaining \$9 million supported the establishment of the National Biodiversity Institute (INBio), to research Costa Rica's biodiversity and facilitate "biodiversity prospecting" agreements with foreign pharmaceuticals firms (Umana 1995).

Despite coordination problems among NPF, the National Parks Service, domestic and international NGOs, and questions about management of funds by NPF, debt-for-nature swaps

¹¹ Though it has not been widely noted in the literature on debt-for-nature swaps, Costa Rica's first swap was in fact a debt-for-equity exchange which involved primarily commercial actors. This 1987 swap allowed a Minnesota commercial bank to exchange \$10 million in Costa Rican debt for an equity stake in a Costa Rican parastatal that manufactured hardwood doors. The government also provided local currency bonds that allowed the parastatal to buy 5,000 ha of forest, in exchange for the parastatal's commitment to manage the forest for sustainable yield (Umana 1995: 3).

were a qualified success. The NPF bought private land inside parks, increased the number of government and non-government field staff involved in protecting and managing the parks, and promoted non-destructive agroforestry projects around the parks. Debt-for-nature swaps also leveraged direct bilateral aid and counterpart funding from the Costa Rican government. Nevertheless, the additional funding still fell far short of the amount needed to implement full protection of the national parks, or to give sustainable alternatives to forest clearing to all farmers living around the parks (Jacobeit 1996: 149-153; Umana 1995: 8-9).

The Arias administration's forest protection measures reached their high point in September 1987, when the President promulgated an Emergency Forestry Decree. The Decree banned the transport of logs at night (to reduce opportunities for smuggling), the export of logs and lumber, and the establishment of new sawmills.

From that point on, commercial loggers and sawmill owners began to join forces to oppose the restrictions that had been placed on the industry. One of the larger logging firms filed suit against the 1986 law and the 1987 decree, claiming that the provisions restricting log transport were unconstitutional intrusions on private property rights. While the suit was pending, most municipal judges declined to hear cases on violations of the disputed provisions, so the law was essentially unenforced (Dudenhoffer 1990b).

In short, several factors helped the Arias administration initiate environmental reforms in the forest sector despite opposition from relatively resourceful private sector firms:

1. a national political realignment that favored greater protection of Costa Rica's remaining forests;
2. well-placed advocates for environmental protection at senior levels in the Arias administration, in domestic and international NGOs, and in several bilateral aid agencies (particularly the Dutch and the Swedish);
3. the availability of substantial foreign funding to compensate for domestic budget constraints; and
4. the heterogeneous and sometimes conflicting interests of status quo beneficiaries.

The administration met the strongest opposition on the national level, when its proposal to create MINEREM conflicted with broad national consensus on the need to reduce the role of

government in the economy. On the sectoral level, it was able to impose several costly restrictions on the forest industry via legislation and executive decree, but the industry fought back in the courts and effectively blocked implementation of the law.

Creating incentives for smallholder reforestation: As mentioned above, the Arias administration's commitment to equitable use of the country's forests was not as strong as its commitment to forest protection. There were three main reasons for the lower priority given to equity concerns: 1) law and custom had traditionally favored the interests of the landless over those of forest protection, so there was little need for further equity-oriented reforms; 2) the landless and small farmers (in tacit and explicit partnership with loggers who opened forest areas and ranching and plantation companies that bought cleared land) had already cleared large areas of potentially productive forest on public lands, and now threatened the country's national parks; 3) though relatively free from repression and fairly well-organized through regional associations, most Costa Rican *campesinos* were most concerned about agricultural policies; few were well-informed about proposed changes in national forest policy. They did not advocate for further expansion of their right to occupy forest land, nor did they organize to oppose the 1986 forestry law's restrictions on unauthorized land clearing.

Consequently, the Arias administration's equity-oriented proposals within the forest sector were really offshoots of its environmental proposals. In the forestry law of 1986 and in the establishment of a Forestry Development Fund (FDF), it aimed to create incentives for *campesinos* to support the administration's environmental goals. The 1986 forestry law authorized direct payments to small farmers in the form of bonds which covered the full cost of reforestation over a five year period. The FDF, established in 1988 with Dutch support, provided zero-interest loans for small farmers who planted trees on up to 5 hectares of their own land. Finally, the administration established several "integrated conservation and development" (ICD) projects on the borders of some national parks, with foreign donor support (Umana 1995).

The administration did not propose to cut back the pre-existing reforestation tax credit for large firms in order to fund its new payment and loan programs for small farmers. Instead, it sought a very modest domestic budget commitment for the reforestation payment program, and secured foreign aid for the loan and ICD projects.

Because the government did not propose to cut back the tax credit program, large commercial firms did not oppose the expansion of reforestation incentives to small farmers. By 1989, however, journalists, NGOs and the Legislative Assembly had exposed a number of abuses of the tax credit program, and there were calls to eliminate it.¹² At that point the Chamber of Reforesters, the national association of reforestation tax break beneficiaries, began claiming that small farmers had been equally negligent in the use of their grants and loans, and all reforestation programs came under increasing scrutiny (Dudenhoffer 1990f; Peuker 1992: 18-20, 24).¹³

Outside the forestry sector, the Arias administration accelerated the pace of land titling for small farmers. The primary aim of the land titling initiative was to improve small farmers' access to credit and reduce land conflicts, not to improve forest protection. Supported by a World Bank loan, the initiative aimed to title roughly 25,000 parcels, a fraction of the estimated 100,000-200,000 *precarista* holdings. It may nevertheless have contributed to a reduction in the rate of forest clearing. To minimize opposition from large landowners, the administration concentrated its titling effort on public lands that had been occupied by *precaristas*. Though the administration made no systematic effort to target *precaristas* adjacent to forests, the public lands they occupied were usually marginal areas on the agricultural frontier, near forested areas (World Bank 1993d:10; Dudenhoffer 1990g).

"Rationalizing" the forest industries: Promoting economic efficiency in the forest sector was clearly the Arias administration's lowest priority. Unlike the Southeast Asian countries, where economically and politically powerful firms and associations succeeded in blocking efficiency reforms until they had exhausted most of the rents from forest exploitation, Costa Rica had small and fragmented forestry industry. If efficiency reforms were not high on the government's agenda, the reasons had more to do with the government's own priorities than with organized industry opposition.

At the national level, the Arias administration did not seek to push economic liberalization any further, but rather to consolidate the reforms initiated by the Monge administration. It was

¹² By one credible estimate, more than half of the "reforested" land had been under natural forest cover at the time that it qualified for the tax credit; in other words, it had been logged or burned in order to make it eligible for the tax credit. Plantation tree survival rates were no greater than 60% after two years, considerably lower than the 90% average achieved on well-managed private plantations (Peuker 1992: 20; Dudenhoffer 1992e).

¹³ In one of the more colorful critiques of the smallholder reforestation program, the head of the Chamber of Reforesters suggested that "farmers should be planting rice and beans, not trees," and that most of the smallholder reforestation funds had gone to support "communist unions" (Dudenhoffer 1990f).

far more concerned about providing a safety net for small farmers and the PLN's core constituencies (public sector and parastatal employees and urban unions). In some sectors, the administration wanted to roll back reforms to restore the state's role in catalyzing and managing investment (EIU 1987). Within the forest sector, the wood industries (logging, processing and wood products) were not well-organized to represent their interests. As discussed above, they were not vertically integrated, were not major players in the national economy, and were more closely associated with the opposition party, the PUSC, than with the President's PLN.

The reforms the Arias administration proposed to address economic problems in the sector, like the reforms it proposed on equity issues, were designed primarily to support the administration's environmental objectives. Moreover, the administration's reforms used regulations and sanctions more than economic incentives to achieve economic goals. The 1986 forestry law increased stumpage fees to 10 percent of their replacement value (determined to be 188 *colons* per cubic meter) from their previous level of 4.25 *colons* per cubic meter. While dramatic in comparison with the previous levels, the 10 percent fee was still far below resource rent, and not enough to encourage greater efficiency in forest harvesting. Low collection rates further dampened the effect of the higher tax. Though nominal rates increased by a factor of nearly 50, collections rose only by a factor of 15. There was no significant drop in domestic harvesting rates to account for the difference, suggesting that tax collection effort was quite weak (Peuker 1992: 15-16).

The 1986 law also imposed an additional 10 percent tax on logs processed outside the region where they were felled. This measure was designed to encourage co-location of sawmills in regions with productive forests. The measure was not effective, mainly because the price of logs was a small fraction of total costs from the perspective of most sawmills.¹⁴

In 1987, the administration tried a new set of sanctions and incentives to rationalize the sawmill industry and create incentives for sustainable management of production forests. Under the Emergency Forest Decree, the President banned the establishment of new sawmills and encouraged existing wood products firms to integrate vertically by purchasing sawmills and

¹⁴ Logs accounted for less than 10 percent of raw materials cost, and raw materials accounted for less than 5 percent of total costs for most sawmills. Since transport to markets accounted for a third of total costs for the average sawmill, location of markets for finished lumber was a far more important determinant of sawmill location than location of timber stands (Peuker 1992: 3).

forests. Again, given the low cost of raw materials and the relatively well-functioning market in logs, the industry did not respond enthusiastically to the decree. A number of the least efficient sawmills were going out of business in any case due to a combination of increasing competition from more efficient firms, tighter credit markets and rising log prices. From 1984 to 1990, the number of operating sawmills dropped from 220 to 160 (Dudenhoffer 1990d).

To promote efficient reforestation, the Arias administration and the Legislative Assembly tried to establish monitoring and verification procedures for the reforestation tax credit program. The Legislative Assembly found that at least ten percent of reforestation claims were fraudulent, but decided nevertheless to continue the tax credits. The Arias administration also introduced a reforestation bond program that required firms to demonstrate tree survival before receiving payment, but also made the bond a transferable instrument that could be bought and sold among private parties, as well as used to pay taxes. The bond program was less attractive to most large firms than the tax credit, so it did not become widely used (World Bank 1993d: 19-21). In any case, as analyzed further below, even "bona fide" use of the reforestation tax credit and bond programs was almost certainly not the most efficient use of government funds.

Though it made some attempts to promote efficient use of the country's production forests and to encourage cost-effective use of reforestation subsidies, the Arias administration did not directly confront the primary economic problem for production forests: the gap between the private (i.e. financial) and social (i.e. economic) values of forested land. Private landowners, who owned more than one third of the country's forest and more than half of forest which could be legally harvested for production, could earn the best returns on this land by converting it to other uses (MINEREM 1990: 5; Kishor and Constantino 1994a). Until the early 1980s, a combination of market conditions and government policies made cattle ranching the highest value use for most forested land. When the global recession of the early 1980s and the government's elimination of subsidized credit programs hurt returns to cattle, incentives shifted so that for small farmers with high discount rates, the most profitable use of forest land unsuitable for agriculture was usually to "mine it" (harvest its standing timber and then leave it fallow). With rising prices for timber, large farmers and investors could earn the best return by clear-cutting the natural forest and replanting the land with fast-growing tree species (see Figure 2).

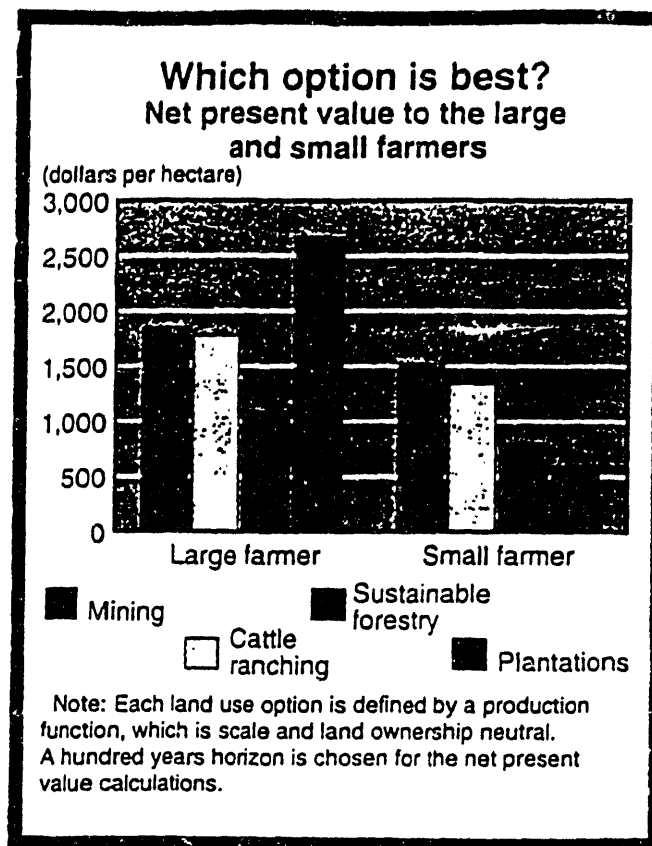


Figure 2: Returns to alternative uses of forest land for small and large farmers in Costa Rica, circa 1989. Source: Kishor and Constantino (1994b: 38).

Though biologically diverse natural forests were not growing fast enough to earn a competitive rate of return for private owners, they were generating positive externalities for Costa Rica and the world. A World Bank analysis by Kishor and Constantino (1994a) analyzed the net present value (NPV) to high and low discount rate landowners from four alternative uses of forest land (sustainable forestry, mining, conversion to forest plantation, and conversion to pasture) in 1989. They also calculated the domestic and global environmental benefits associated with each alternative.¹⁵ The authors found that

¹⁵ The two landowner groups were those with a discount rate of 12% or lower (roughly the market rate in Costa Rica, available to creditworthy individuals with collateral such as land titles) and 20% or higher (the discount rate for poor farmers, based on informal credit market rates available to those without collateral). The four land use options had the following assumptions: 1) sustainable forestry removes 20% of trees each harvest, reseeds with high value species and cuts again after a 40 year rotation; 2) mining removes 60% of trees, leaves the stand to regrow for 40 years, then cuts a second, low value harvest; 3) conversion to plantation cuts all the standing timber, sells the trees with commercial value, burns the remaining ground cover and plants the land to construction quality timber with a 10 year rotation; 4) conversion to pasture cuts all standing timber, sells the valuable timber, seeds the land with grass, buys cattle and waits 2 years for a first culling. Domestic environmental benefits included stabilization of soils and hydrology, monetized in terms of avoided costs of crop loss, irrigation and dam system repair. Global environmental benefits included carbon sequestration, ecotourism, option and existence

1. The combined domestic and global benefits of managing natural forest sustainably instead of mining it were in the range of \$1500/ha. The combined benefits of managing forests sustainably instead of converting to plantations was in the range of \$2300/ha. In both cases, the combined benefits were greater than the opportunity cost to landowners for foregoing the next best use (i.e. than mining the forest or converting it to a tree plantation).
2. The large majority of the total benefits (roughly 70%) were global in both cases. In contrast to the value of combined global and local benefits, the domestic environmental benefits of sustainable forestry were lower than the private benefits from mining a forest or converting it to a plantation.

The analysis showed that with the exception of forests with very low commercial value and/or very high domestic environmental sensitivity, Costa Rica could not justify making payments to landowners that would be large enough to compensate them for managing their forests sustainably. On the other hand, if other countries were willing to pay their citizens' share of the global benefits, the combined domestic and international payments could give landowners adequate incentives under a wide range of conditions. Finally, the analysis showed that the most cost-effective use of compensation payments would be to target them to poor farmers.¹⁶

Though the Kishor and Constantino results indicate that individuals and firms with access to capital could earn a competitive return on investments in forest plantations, most investors nevertheless took advantage of the reforestation tax credit and reforestation bond programs. From 1986 to 1989, nearly 30,000 hectares were reforested using these programs. Less than 1500 hectares were reforested without subsidy (World Bank 1993d: 20). In other words, savvy private investors took advantage of the government's tax breaks to increase the profitability of their investments, though they could have made a profit without the tax breaks.

Furthermore, the Kishor and Constantino results (as well as a World Bank forestry sector review that incorporated the results (World Bank 1993d: 36-40) suggest that from a global point of view it would have been more efficient to pay poor farmers to practice sustainable forestry on existing forest land than to pay them for reforestation.¹⁷ Rather than helping maintain natural

value.

¹⁶ The poor farmers' benefit/cost ratio (15/7, or 2.1:1) is greater than the ratio for wealthy farmers (23/16, or 1.4:1).

¹⁷ As noted above, the Costa Rican government could only justify shifting the subsidy system from reforestation to natural forest management if it received roughly \$500 in aid for every \$200 it spent on payments to small farmers.

forests, the subsidy for reforestation was effectively increasing incentives for both poor and wealthy farmers to clear forest land and replant it.

In fairness to the Arias administration, the analysis by Kishor and Constantino and the World Bank recommendations that flowed from it were not completed until after Arias left office. Nevertheless, there was substantial evidence during Arias' term that most of its efficiency-oriented reforms were either counterproductive (the log and sawnwood export bans), ineffective (the attempt to promote vertical integration of the forest industry), inadequate (the increase in log taxes) or unnecessary (the reforestation bond program for large plantations). Furthermore, international forestry advisors in the World Bank, the Inter-American Development Bank and USAID had recommended alternative policies: lift the export bans, stop trying to regulate the structure of the forest industry, tax logs at a rate close to their resource rent, eliminate reforestation subsidies for wealthy investors, and subsidize natural forest management by small farmers instead.

There were three reasons why the administration chose the particular set of efficiency reforms it did, rather than those recommended by international aid agencies. First, further efficiency gains were not a priority for the administration at the national level, or for MINEREM Minister Umana and his allies at the sectoral level. Second, except for the firms that benefited from reforestation subsidies, the forestry industries were not influential enough to overcome public and government perceptions that they were responsible for deforesting a large portion of the country and therefore should be tightly regulated. Third, a number of the conceptual issues and valuation methods needed to identify and evaluate alternative uses of forest land were still at an early stage of development. Until the series of World Bank analyses that began in 1992, the government itself did not have a clear idea of the costs and benefits associated with these alternative uses, or of the policy instruments that it could use to optimize the use of its remaining forest lands.

4. Conclusion: the Arias reforms in national and sectoral context

This analysis has argued that the Arias election represented a moderate political realignment in favor of both equity and environmental goals. It has also argued that Arias' appointment of a leading environmentalist to head a newly empowered cabinet ministry for natural resources

effectively gave environmental goals top priority in the natural resource sectors, including the forest sector. Under Alvaro Umana, MINEREM and its domestic and international environmental supporters initiated a series of reforms aimed at conserving the nation's forests, while ensuring that conservation did not come at the expense of small-holders living in and around forested conservation areas.

Though the environmentalist-dominated MINEREM was remarkably successful in meeting environmental objectives through the establishment of SINAP, its performance on equity and efficiency goals was not as impressive. The Arias administration had both strategic and political reasons to accord equity goals a lower priority than environmental goals. In terms of forest management strategy, Costa Rica's de facto policy of allowing forest clearing by the landless had contributed significantly to deforestation, and the landless now threatened the national park system. On the positive side, equity-oriented programs for the rural poor outside the forestry sector (e.g. rural health and education, land titling) gave the administration some confidence that it could crack down on forest clearing without seriously jeopardizing livelihoods for large numbers of the rural poor.

Politically, *campesino* organizations did not actively oppose policy changes that made it more difficult to gain rights to deforested public land. Their primary interest was in getting access to reforestation funds that had previously only been available to large taxpayers. The administration did respond to *campesino* political pressure by creating a new set of incentives for smallholders to reforest their lands, but it targeted its efforts on smallholders living in and around conservation areas.

Efficiency goals were the lowest priority for MINEREM and its supporters. Indeed, MINEREM did little to correct existing market and policy failures, and it imposed several new economic distortions in the forestry sector. The administration's relatively lackluster attempts to initiate efficiency-oriented reforms can be explained by the interplay of national and sectoral factors identified in my propositions. At the national level, the Arias administration saw economic liberalization as a constraint on its equity and environmental objectives. It sought to moderate, not to accelerate, the pace of efficiency-oriented reform. At the sectoral level, forestry industries were stagnant or in decline; they were internally fragmented rather than vertically integrated or

connected to multi-sectoral conglomerates; and they were more closely allied with opposition parties than with the PLN.

With no strong constituency at either the national or sectoral level for efficiency-oriented reforms, the Arias administration was free to intervene in the forestry sector in ways that generally ran counter to the efficiency reforms recommended by national and international experts. In practice, its attempts to promote vertical integration favored the interests of the country's few existing integrated firms at the expense of log and lumber producers.

B. The Calderon Administration: a tilt toward the market

At the national level, the election of Rafael Angel Calderon represented a clear political shift in favor of economic efficiency goals. Though Calderon painted himself as a "man of the poor" in his election campaign, equity goals were secondary during his term. Similarly, after announcing plans to put Costa Rica at the center of a "New World Environmental Order," Calderon did little more than consolidate environmental reforms enacted by the Arias administration.

Within the forest sector, the Calderon administration's policies also aimed to improve economic efficiency. Under Minister of Natural Resources Hernan Bravo, MINEREM supported changes in forest policy to help forest industries that had been neglected, and in some cases hurt, by the Arias administration's policies. It also sought to use market-based instruments to promote forest conservation. Though economic goals were the administration's top priority in the forest sector, it also supported consolidation of the national protected areas system, a reform initiated under Arias.

These shifts in the government's national and sectoral priorities interacted with changes in the strategies and resources of sectoral advocates to produce some significant policy reforms, as well as a deadlock over a new draft forestry law. With assistance from USAID and support from senior officials in MINEREM, the forest sector industries were able to organize for advocacy and to dismantle some of the regulations and taxes that had been enacted under Arias. The forest industries were also able to block enactment of a new forestry law that would have enshrined several of MINEREM's regulatory restrictions on commercial forestry.

In contrast, environmentalists who remained in civil service positions in MINEREM found themselves fighting defensive battles against the expansion of banana plantations on the Caribbean

coast, and against the expansion of tourism throughout the national parks system. Senior Calderon officials in MINEREM, not the environmental coalition that had developed under Arias, championed the creation of a program to give owners of large forests financial incentives to manage their forests for sustainable yield, rather than clearing them for other uses.

Finally, *campesinos* became better organized to advocate for their interests during the Calderon administration, but they focused their efforts on consolidating the benefits they gained from existing programs. At the beginning of the Calderon administration, *campesinos* formed an organization to gain support for smallholder agroforestry, reforestation and natural forest management. Several provisions of the draft forestry law favored their interests by authorizing smallholder incentive programs. The *campesino* organizations were unable, however, to overcome opposition from the forest industries to the new draft forest law. Stymied in the national Assembly, they turned their attention to MINEREM, lobbying for additional reforestation funds and reduced DGF oversight of smallholder reforestation programs.

1. The Calderon election: an efficiency-oriented realignment

As the national elections of 1990 approached, Costa Rica had recovered from the economic crisis of the 1980s. Investors, owners and workers in both traditional (coffee, bananas, sugar) and non-traditional (textiles, electronics, vegetables, flowers) export industries were increasingly open to economic liberalization as a means to promote trade and attract foreign investment. Both the PLN's presidential candidate and the PUSC's candidate, Rafael Angel Calderon, supported further economic liberalization. Calderon, however, embraced a market-based approach to economic development much more strongly than the PLN candidate (EIU 1993b; *Tico Times* Feb. 2, 1990: 11).

Calderon's election represented a national political realignment in favor of economic efficiency, as the economy recovered from the serious recession of the 1980s. With the benefits of recovery spreading, equity concerns were less salient in the election campaign of 1990 than they had been in 1986. The Arias administration's success in establishing a national protected areas system and the slowing of deforestation rates meant that forest protection also had lower priority, and most attention on the environmental front went to urban and industrial pollution.

Calderon came into office promising a market-oriented approach to economic management. Equity-oriented programs would be instrumental to efficiency objectives, e.g. assistance to help small farmers gain better access to markets. Calderon also promised to make Costa Rica a leader in shaping a "New World Ecological Order." Calderon aimed to consolidate Costa Rica's international role as a leader in natural resource conservation and environmental protection, again using a more market-based approach than the previous administration (*Tico Times* Feb. 2 1990: 1 ff.).

Calderon appointed a fruit drink franchise owner, Hernan Bravo, as Minister of Natural Resources. Bravo signaled his preference for balancing environmental protection with resource development, proposing an expansion of joint ventures with foreign mining and oil companies to exploit Costa Rica's mineral and energy potential, and commenting that the country's natural resources "must be managed in a way that permits us to raise the standard of living of Costa Ricans" (*Tico Times* April 6, 1990: 11).

2. The forest sector under Calderon: political deadlock and incremental change

Within the forest sector, the Calderon administration's support for private sector, market-based approaches to natural resource management opened the door for organizing and advocacy by forest industries and their allies in international aid agencies (particularly USAID). During the Calderon years the forest industries were able to overcome internal differences of interest (e.g. among forest owners, loggers and wood products manufacturers), but they were not able to overcome environmental and equity advocates within MINEREM and in *campesino* organizations who sought to consolidate and advance the previous administration's reforms.

Deadlock on the draft forest law: The major advocacy battle of the Calderon administration focused on the draft forest law which a technical team in MINEREM began to prepare in June 1990. The drafting process began in response to a Supreme Court determination that the 1986 forest law was unconstitutional because it had not been passed by a two-thirds majority of the Legislative Assembly.¹⁸ In order to re-establish the legal basis for forest policy as quickly as possible, legislators quickly passed a slightly revised version of the 1986 law.

¹⁸ The case that the Supreme Court decided had been brought on different grounds, namely that the 1986 law's restrictions on the transport of logs by private owners and its felony penalties for violations were unconstitutional infringements of property rights.

Knowing, however, that there were several more cases pending that challenged the constitutionality of the 1986 law's restrictions on the property rights of forest owners, the Legislative Assembly also created a special commission to review the law they had just passed and propose further changes (*Tico Times* June 1, 1990: 16; June 29, 1990: 3).

During the second half of 1990, a team of mid-level MINEREM staff reviewed the current law and drafted a revised law that reinforced the policies established under Arias. The draft law relaxed some of the current law's restrictions on the transport of logs by private owners, but maintained requirements for private owners to submit management plans for DGF approval before cutting trees and to obtain permits for log transport. It also committed the government to continue providing incentives for smallholder reforestation and natural forest management, after the end of the Dutch-sponsored aid program which had piloted these incentives. Finally, it provided no new incentives for commercial management of natural or plantation forests (Silva 1997: 477).

Silva (1997) argues that the forest industries strongly opposed this draft, and organized to block its passage. The industry representatives (including large landowners, loggers, sawmills and wood products manufacturers) advocated for deregulation of most commercial forestry activities. Further, they argued that instead of restricting the rights of owners to clear forests, the government should offer financial incentives for forest owners who agreed not to clear them. The industry representatives gained support from Minister Bravo and other senior political appointees in MINEREM, and from the rural development office of USAID's Costa Rica mission, which was strongly committed to a market-based approach to forest management.

An opposing coalition of public, private and international stakeholders supported the key provisions of the draft law: tight controls on forest owners and industries and increased incentives for smallholder reforestation and agroforestry. This coalition included 1) mid-level officials in MINEREM (especially in DECAFOR (Departamento Campesino Forestal), the office created to administer the Dutch-sponsored revolving loan fund for reforestation); 2) JUNAFORCA (Junta Nacional Forestal Campesino) a newly created *campesino* organization that represented smallholders' interests in the forest sector; and 3) the Dutch international aid agency's Costa Rica office.

Each of these coalitions sought to influence the Legislative Assembly as it reviewed the draft forest law. USAID played a critical role in strengthening the efficiency-oriented coalition, by helping the forest industries form an umbrella organization (the Camera Costaricense Forestal) to represent them. The Camera built consensus among the competing forest industries on a package of policies and incentives for commercial forestry. The package included minimal regulation of forests on private land, continuing incentives for large-scale plantation forestry, and additional incentives for owners of natural forest to maintain rather than convert their forest lands Silva (1997: 479).

For the next three years, neither the efficiency-oriented coalition nor the equity and environmental advocates who supported the MINEREM draft were able to muster enough political support to push their favored version of the draft law through the Legislative Assembly. Only after the Figueres administration came into office, and the pendulum of national politics swung back in favor of smallholder and environmental interests, did the two coalitions reach agreement on a new law.

New incentives for private forest owners: Unable to broker agreement on the direction of forest policy, the Calderon administration tried to meet some of the demands of industry, smallholders and environmentalists through modest expansion of existing forest sector programs. In 1991, MINEREM responded to the demands of natural forest owners by initiating an incentive program for them. Under this program, forest owners who were willing to manage parcels of 50 hectares or more as production forest were eligible for payments ranging from \$465 to \$520 per hectare. The payments were provided in the form of bonds with annual payments spread over five years, after DGF approved the owner's management plan (World Bank 1993d: 21).

Support for smallholder reforestation and park expansion: Similarly, advocates for smallholder incentives secured a commitment from MINEREM to continue the revolving loan program administered through DECAFOR, and to give incentives to farmers living in and around protected areas to practice sustainable agriculture and agroforestry. Advocates for environmental protection secured a government commitment to continue buying up private lands inside national parks (World Bank 1993d: 21-24, 29).

Finally, the Calderon administration was more willing than its predecessor to allow forest conversion by private commercial enterprises. Most notable was the administration's support for

the expansion of banana plantations on the Caribbean coast. Responding to labor unrest and plant diseases on the Pacific coast and to new markets for fresh fruit in central and Eastern Europe, many plantation owners began to buy and clear land on the Caribbean coast in the early 1990s. The administration allowed this clearing to continue, despite indications that the lowland tropical forest soils would not support banana trees for more than a few years. Though the total area deforested by plantations was modest during Calderon administration (on the order of 2000 hectares per year), there was substantial collateral damage from migrants who entered the coastal region to work on the plantations and also cleared land of their own to farm (Vandermeer and Perfecto 1995).

The Calderon administration's willingness to condone forest clearing led environmental advocates to put direct pressure on the banana companies through local protests, domestic and international media campaigns. Plantation owners responded by opening negotiations with environmental advocates. By 1993, several of the multinational and local plantation companies agreed not to buy land that was currently or recently forested (Dudenhoffer 1990e).

3. Conclusion: weak state leadership and the growth of organized advocacy under Calderon

The Calderon administration left behind a mixed record in the forest sector. In line with its national priorities, it succeeded in increasing incentives for private owners to manage forests for sustainable yield. On the other hand, despite its oft-proclaimed commitment to environmental protection, the administration did relatively little to build on the environmental protection reforms initiated under Arias. Further, its overarching interest in promoting export growth led the administration to accept deforestation along the Atlantic coast as a small price to pay for boosting the banana industry.

The state's relatively weak sectoral leadership created opportunities for non-governmental political actors to influence policy in several arenas, from the Legislative Assembly to MINEREM's regulatory process to local implementing agencies. Because there was no dominant sectoral coalition, policy outcomes ranged from log rolling to negotiation to deadlock. In forest sector budgeting, advocates for the interests of commercial, conservation and community forestry won small increases in program budgets. In the fight over banana plantation expansion, the state's

unwillingness to take a stand left conservation advocates and plantation companies to negotiate with each other; direct action and public relations strategies played a much more prominent role in those negotiations than policy advocacy. Finally, the administration's internal disagreements over the draft forest law, and the disagreement between the administration and the Legislative Assembly on the relative priority of commercial and conservation goals, again created opportunities for non-governmental actors to influence policy.

In the case of the draft forest law, however, the rough parity in advocates' resources led to deadlock rather than a negotiated compromise. One reason for the failure of negotiations is that the stakes of the debate were higher for the forest law than for banana plantation expansion. Moreover, the larger number of actors and decision points involved in the legislative debate increased the uncertainty and the transaction costs of negotiations relative to negotiations with individual plantations over discrete pieces of land. Finally, though it is not clear that leadership by senior MINEREM officials could have been decisive in the draft forest law debate, MINEREM's internal divisions and inability to commit to a draft made it significantly more difficult for opposing coalitions to find a "focal point" proposal around which to build consensus. It took a change in national leadership to overcome these sectoral divisions.

C. The Figueres administration: an incentive-based "Alliance with Nature"

1. Figueres and the invention of a mandate for sustainable development

When the PLN returned to power in 1994 under President Jose Maria Figueres, Costa Rica was in a period of relative tranquillity, with no immediate economic or political crisis. Nevertheless, Figueres' election signaled a substantial realignment in favor of equity and environmental goals, essentially a return to the priorities of the Arias government. Within the forestry sector, however, the Figueres administration was more creative than the Arias administration in devising economic incentives to promote conservation. The Figueres administration's forest sector policies reflected both the evolution of the domestic political debate among sectoral advocates, and the influence of international experts and foreign governments who worked with the government to develop new economic instruments for forest conservation.

In the election campaign of 1993-94, Figueres--a dynamic young technocrat who was also the son of the three-time president who had built Costa Rica's social welfare system--proposed a "social development" platform that emphasized economic equity over growth or efficiency. He attacked the Calderon administration's neo-liberal policies for failing to help the poor. He opposed the Calderon administration's agreement to privatize state banks and the national insurance system in exchange for a third World Bank structural adjustment loan. He also proposed to provide low-interest credit for small business and small farmers (*Tico Times* January 7, 1994: 30).

Though he did not make the environment a major issue in his campaign, Figueres did propose creating a national land use plan to ensure highest and best use of land for urbanization, agriculture, forestry, soil conservation and biodiversity conservation. He also argued for investment of public funds in the tourism industry to ensure that Costa Rica rather than foreign firms captured tourism's benefits, and to ensure that tourism did not overwhelm environmentally sensitive areas (*Tico Times* January 7, 1994: 30).

Immediately after his election, Figueres signaled a more substantial shift in favor of environmental conservation, by announcing a rather grandiose plan for making "sustainable development in alliance with nature" the basis for all government policies. On his government's first day in office, Figueres held a conference on sustainable development with his entire cabinet and number of regional and global experts in natural resource management, as well as multilateral and bilateral aid agency officials from whom the administration hoped to secure additional funds for conservation. Figueres also appointed an American-educated ecologist, Rene Castro, as Minister of Natural Resources. Castro was well-respected by the Costa Rican conservation community, and also by natural resource experts in international aid agencies (CRPC 1997).¹⁹

Unlike the Calderon administration's equally grandiose "New World Environmental Order," which was also supposed to attract additional foreign aid, Figueres' plan included a number of specific policy proposals: an increase in the tax on leaded gasoline, investments in mass transit, a green rating system for hotels, higher national park entry fees for foreign tourists, and public education on environmental conservation (*Tico Times* May 13, 1994: 6,7).

¹⁹ CRPC = Personal communication for Costa Rica. Please see the last part of the bibliography for further information.

2. The Figueres administration's forest sector initiatives

In the forest sector, the administration proposed two major initiatives: institutional reform of SINAC (the national conservation areas system) and new incentives for conservation of private forest lands. In both cases, the government decided to adopt an incentive-based approach, with regulatory enforcement available as a last resort. By using targeted incentives funded from relatively broad-based domestic revenue sources and foreign aid, it created a "concentrated benefits, diffuse costs" political economy of reform (cf. Wilson 1980; Oye and Maxwell 1994). Consequently, the administration faced no substantial opposition to these initiatives.

Reforming SINAC: The administration proposed to decentralize management of SINAC and to involve local representatives (from government, business and NGOs) along with representatives of the national parks service and DGF in managing buffer zones and core protection areas. With substantial financial and technical support from international donors, the administration was able to gain legislative approval for decentralization of SINAC, and set up local governing bodies for each of the nine major conservation areas. Led by MINEREM and the directors of SINAC, the government also established several funding sources for each area. These sources included entry fees for tourists (fees were higher for foreign than domestic tourists) and scientific researchers, royalty agreements for any products developed from genetic material in Costa Rica's forests, and charges to local governments for water and soil conservation services. These user fees were to be supplemented by central government allocations and foreign aid (Vaughan and Rodriguez 1997).

New incentives for forest management and reforestation: Though SINAC was clearly the administration's top priority, MINEREM also revised and expanded the incentive program for private forest owners initiated under Calderon. It created a new source of domestic funding for the program by dedicating one third of the proceeds of a 15 percent tax on gasoline to the National Forestry Fund (*Tico Times* January 6, 1995: 6). It also created opportunities for foreign aid agencies and private investors to invest in Costa Rican forest conservation and reforestation projects.¹⁹ With these revenues in hand, it broadened the options available to private forest owners by offering three different incentive packages: one for protection of relatively undisturbed

¹⁹ Costa Rica offered these "investment opportunities" as carbon offset pilot projects under the Framework Convention on Climate Change (see *Tico Times* May 13, 1994: 7).

forests, a second for reforestation of degraded forests, and a third for sustainable harvesting of productive forests. Reflecting the opportunity costs associated with each of these options, forest owners who chose protection received the largest payments; those who chose reforestation a lesser amount, and those who chose sustainable harvesting the least. The administration also made these incentives available to holders of smaller forests, down to 10 hectare parcels (CRPC 1997).

As the Figueres administration demonstrated its willingness to try incentive-based measures, rather than regulation alone, it won back the confidence of the forest industries that had opposed the draft forestry law during the Calderon administration. In 1996, the Legislative Assembly passed a new Forestry Law that gave permanent budgetary authorization to most of the incentive measures piloted during the first two years of the Figueres administration. On the other hand, to assure domestic and international environmental constituencies that the state would still step in to stop deforestation if incentive measures failed, the 1996 Forestry Law also maintained many of the penalties for unauthorized deforestation first established in the 1986 Forestry Law (Silva 1997: 479-80).

Finally, the administration also took steps to encourage reforestation of degraded grazing lands. As timber prices rose due to local scarcity, reforestation was already becoming more financially attractive for well-capitalized firms, but not for smaller ranchers who wanted to continue raising some cattle on their lands. Under the framework national land use plan, the Figueres administration shifted the remaining credit subsidies for cattle ranchers toward reforestation of degraded grazing lands. For these smaller ranchers, the administration began to develop a package of extension and credit services that used reforestation to regenerate soil on grazing lands and create "living fences" between pastures (*Tico Times* January 6, 1995: 5).

3. Conclusion: a successful alliance with nature?

In sum, the Figueres administration's forestry policies reflected not only a domestic political realignment that once again favored conservation, but also an evolution of strategies and capabilities among domestic political actors. Recognizing that the conservation-oriented draft forestry law could not pass the Legislative Assembly without a lobbying battle, and that it would be open to legal challenges even if it did pass, conservation advocates within the administration, in domestic and international NGOs opted for an incentive-based strategy. Conservation advocates' strategies were also influenced by the domestic and international learning process about the feasibility of using economic incentives for conservation, and by an expanding economy that made it possible to create new national and local revenue sources for these incentives without sparking substantial political opposition.

To date, the forest conservation incentives implemented under the Figueres administration appear to be achieving their conservation objectives. For example, demand for natural forest management incentives has outstripped the National Forest Fund's annual allotment, and most private forest owners appear to be complying with harvesting and clearing restrictions (CRPC 1997). The future sustainability of these incentives will depend on continuing domestic and international willingness to pay for the forests' environmental services. If willingness to pay drops (e.g. due to national and/or global recession), then political mobilization by those who benefit from the current incentive programs may be critical to ensuring their survival.

IV. Conclusion

Though Costa Rican reformers have sought to make forest use more efficient, environmentally sound and socially equitable, the pace and scope of reform in Costa Rica have been more gradual than in either the Philippines or Thailand. As this dissertation's arguments on reform initiation would suggest, differences in national circumstances help explain much of the cross-national variation in the pace and scope of reform.

During the period examined in this study, Costa Rica maintained regular presidential elections within a stable two-party democratic regime. Though the economic crisis of the early 1980s shaped and constrained national policy goals, Costa Rica has not experienced national

political or economic crises severe enough to force structural change in the political system. Consequently, there has been less pressure at the sectoral level to initiate major reforms, and less dramatic change in the political identities, resources and strategies of sectoral advocates. Given a stable set of national political institutions and broad political consensus on the need to promote both social equity and economic efficiency, sectoral reformers in Costa Rica have generally sought incremental rather than discontinuous shifts in forest policy goals and programs.

Cross-national differences in the identities, interests and political resources of forest sector actors also help explain differences in reform processes and outcomes. Historically, Costa Rica's tropical forests did not yield hardwoods with the commercial value of Philippine mahogany or Thai teak. Moreover, private landowners controlled a much greater proportion of forest lands in Costa Rica than in the other two countries. Consequently, Costa Rica's commercial logging sector has played a less important role in shaping forest sector policies and institutions than its counterparts in the Philippines and Thailand. Because forest products have not been major contributors to Costa Rica's economic development, forest policy itself has been less important than broader land use policies in shaping forest use. Instead, strong demand for land from commercial ranchers and plantation owners led Costa Rica to develop agricultural and land use policies that explicitly allowed forest conversion for commercial use. In this respect Costa Rican land use policies were far more permissive than forest conversion policies in the Philippines or Thailand, where governments had stronger incentives to maintain commercially valuable forests.

There is less difference in the three countries' treatment of farmers who cleared and settled on public forest lands. Reflecting its egalitarian national political culture, Costa Rica had given greater explicit rights to settlers than either the Philippines or Thailand. Still, all three governments had offered forest land as a way to reduce pressure for redistribution of private lands and public programs for the rural poor. In the period of this study, equity-oriented Costa Rican reformers actually had less success in promoting redistribution of forest land rights than their counterparts in the Philippines or Thailand. Costa Rica's previous success in promoting broad-based economic development and in providing land to the landless arguably deprived equity-oriented advocates of a strong rationale for further equity-oriented reforms. Instead, advocates for equity-oriented reforms tended to present small farmer reforestation and forest

management programs as instruments for achieving environmental conservation goals, rather than as an end in itself.

It is in the area of environmental conservation that the differences among Costa Rica, Thailand and the Philippines are sharpest. Of the three countries, Costa Rica had by far the strongest base of organized advocates for forest protection in the mid-1980s. These advocates dominated forest policy during the Arias administration, and were able to consolidate their gains under Calderon and Figueres. In contrast, Thailand's environmental advocates were only weakly organized in the mid-1980s and expanded their influence in part by building coalitions with small farmer federations. Only in the early 1990s did a full-fledged environmental movement emerge in Thailand. In the Philippines, environmentalists still remain heavily dependent on support from equity-oriented rural development groups for political influence.

These differences in the strength of the environmental movement clearly help explain cross-national differences in forest policy development. Under Arias, Costa Rica's environmentalists framed the deforestation problem as a threat to the national park system, and built both domestic and international support for forest protection as the primary goal of forest policy. In Thailand during the same period, the growing strength of the environmental movement led to growing tension between environmental and equity advocates over the use of the country's forests. The struggles over forced resettlement, expansion of the national park system and the community forest law in the early to mid-1990s all reflected this tension. In the Philippines, the equity-oriented advocates who dominated forest policy making framed the goals of forest policy as "giving forests back to the people." Philippine environmental groups have not gained the broad base of support their counterparts have in Costa Rica or Thailand, and they have not had nearly as great an influence on policy making.

The Costa Rica case qualifies the argument of this dissertation in one important respect. It highlights the importance of national political institutions in shaping national political circumstances.²⁰ In contrast to the Philippines and Thailand, where national political institutions have been open to challenge throughout the period of this study, Costa Rica has maintained the

²⁰ Though this point is often overlooked in the literature on reform initiation (e.g. Grindle and Thomas 1990; Ascher and Healy 1992) it is certainly not original to this dissertation. It is central to the literature on comparative political institutions (see e.g. Huntington 1968, esp. Ch.6; Nordlinger 1987) and has been one important focus of research on the politics of economic adjustment during the 1980s (see e.g. Evans 1992; Haggard and Kaufman 1992).

stability of its presidential, two-party democracy. If a left-wing insurgency like the Philippine NPA (or those facing several of its Central American neighbors), or champions of authoritarianism like those among the Thai military leadership had challenged the democratic capitalist regime in Costa Rica, national circumstances would almost certainly have been more turbulent, and would have created greater openings for dramatic change in sectoral policies, including forest policies. In fact, Costa Rica's political and economic institutions made such challenges highly unlikely (though not unthinkable), even in the face of very difficult economic circumstances in the early 1980s.

The importance of national political institutions in explaining the quieter course of Costa Rican reforms does not invalidate the argument that national political circumstances play a critical role in shaping the timing and content of sectoral reforms and the resources and strategies of sectoral reform advocates. It does suggest that any analysis of those circumstances should also take note of national political institutions. Where those institutions facilitate the representation of diverse affected interests and consensual responses to adverse shocks or trends, we should expect moderate political realignments, rather than crises, to characterize national political circumstances. On the other hand, where national political institutions do not facilitate broad representation of affected interests or consensual responses to adverse shocks or trends, we should expect adverse shocks to produce national crises. Thus national political institutions can help explain why some countries are more crisis-prone than in others, in turn helping explain why sectoral reformers may be able to initiate more far-reaching (or at least discontinuous) reforms in some countries than in others.

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Chapter 7

Conclusion

In this chapter, I review and qualify the argument on the initiation of natural resource policy reforms in developing countries; suggest some implications of the research for comparative analysis of political institutions; draw practical lessons for reformers in developing countries; and suggest possible directions for further research.

I. Review and Qualification of the Argument

A. Review of the Argument

This dissertation began by tracing the historical development of natural resource policies in both developed and developing countries. The first chapter highlighted the long-standing propensity of political leaders to establish policies that deliver short term economic and political benefits to elites, while imposing economic, environmental and social costs on more diffuse and less influential social groups. Turning to recent history, it noted several reasons why natural resource policy failures tend to be more pervasive and more difficult to correct in developing countries than in developed countries.

The second chapter of the dissertation began with a research question: given the very strong political and economic interests that support status quo natural resource policies in developing countries, how can reformers ever succeed? After defining what was meant by reform (welfare-enhancing changes in economic efficiency, environmental quality and/or social equity), it reviewed some of the most pertinent literature on the causes of reform initiation. Based on this review, it identified and defined three catalysts of reform that seem to apply across countries and issue areas: crisis, political realignment, and new ideas and information.

It then looked at how these catalysts might apply in developing country natural resource sectors. It became clear that the context for natural resource policy making in most developing countries creates formidable obstacles to the operation of these catalysts. Would-be reformers in developing countries face not only long lag times between the beginning of resource exploitation

practices and the appearance of their economic, environmental and social costs, but also entrenched and influential status quo beneficiaries; high collective action costs, political and sometimes personal risks in their attempts to mobilize cost-bearers; and a paucity of policy networks or epistemic communities that could reduce uncertainty about the impacts of status quo natural resource policies and bring policy failures to the attention of sectoral or national leaders. In combination, these obstacles make it very difficult for sectoral reformers to create or take advantage of crisis, political realignment or new ideas and information that might otherwise catalyze reform.

Nevertheless, there are some conditions under which reformers can surmount the barriers to sectoral reform. I argued that there were at least two possible routes to reform initiation. The first route is via the exhaustion of the commercial or livelihood value of the resource to status quo beneficiaries. The lower the value of the resource to status quo beneficiaries, the less likely that they will mobilize to defend their privileged access to it. Further, the more severe the consequences of resource exploitation, the more likely that cost-bearers will mobilize to demand reform. Once the benefits from the status quo have been nearly exhausted, a catalytic moment of crisis or political realignment, or the dissemination of new ideas and information among policy makers may lead to reform.

Though this first route may lead to changes in policy, it is problematic from the standpoint of achieving economic, environmental or equity gains. By the time the commercial value of the resource is exhausted, its economic value is likely to be low, the cost of remediating the associated environmental damage high, and the resource stocks and flows available for redistribution to the less-well-off minimal.

The second route to reform initiation is more complex, because it requires the interaction of sectoral- and national-level circumstances and actors. Nevertheless, this route offers would-be reformers a greater opportunity than the first to initiate reforms before the natural resource has been depleted. In brief, the second chapter argued that sectoral reformers may be able to take advantage of national circumstances that favor their sectoral policy goals--economic efficiency, environmental protection and/or social equity. The pressure of national crisis, or the opportunities created by national political realignments, may create opportunities for sectoral actors to form alliances with national and international actors who share their goals. Using these

alliances, sectoral reformers may be able to override or circumvent the resistance of status quo beneficiaries at the sectoral level.

Having sketched two plausible stories about the conditions under which reforms in the natural resource sectors of developing countries might be initiated, the dissertation formalized them as propositions for investigation. In the second section of the second chapter, it proposed a method for investigating these propositions, by examining the recent record of attempts to initiate reforms in the forest sectors of three broadly comparable tropical developing countries. The methodology section defined key variables for observation and measurement, including the national circumstances at the time a reform was proposed, the objective(s) of the proposed reform, the identities and political resources of reform advocates and status quo beneficiaries, the commercial value of the natural resource to status quo beneficiaries, and the outcome of the reform attempt.

The second part of the dissertation applied this methodology to examine the record of reform attempts in the forest sectors of the Philippines, Thailand and Costa Rica since the early 1980s. By examining twenty-nine attempts to initiate reform under a wide range of national and sectoral conditions, this part of the dissertation sought to see how well the propositions on reform initiation fit the empirical evidence. As summarized in the Introduction to Part II and presented in detail in the three empirical chapters, the evidence does tend to support the propositions and the reasoning behind them.

In all three countries, the history of forest policy development provided illustrations of the general tendency of political and economic elites to gain control of valuable natural resources and allocate them for immediate political and economic benefit. The Spanish and American colonial governments in the Philippines and the Thai monarchy sought to extend their control over commercially valuable forests and use them as sources of political patronage. Though Costa Rica's government did not claim control of vast tracts of forest land, wealthy families and large firms that planted coffee and fruit benefited disproportionately from the de facto open access to forests from the mid-19th to the mid-20th century. During the postwar era, Philippine and Thai government leaders continued to use forests as a source of political patronage, and to a lesser extent as a source of land for the landless. In postwar Costa Rica, plantation owners continued to benefit from easy access to forest land; they were joined by ranchers and *campesinos* who

benefited from new government policies that actively promoted conversion of forest land for ranching and smallholder farming.

In all three countries, abundant forests were rapidly depleted during the period from 1950 to 1980. Throughout this period logging and the use of deforested areas for commercial agriculture contributed to national economic development, and the occupation of forest land by the rural landless provided some measure of equity for the poor. At the same time, forest policies encouraged grossly inefficient "cut and run" logging and land clearing by the patrons and clients of political leaders, unsustainable farming of deforested areas by the rural poor, and the loss of environmental services and amenities in deforested areas.

By the late 1950s, forestry experts, environmental and social scientists had begun to gather and publicize evidence about the economic, environmental and social costs of status quo forest policies in each country. Nevertheless, the barriers to reform remained high. New information about the costs of forest exploitation and new ideas about multiple-use forest management were not sufficient to change the interests or behavior of the groups that benefited from the status quo. Nor were sectoral reformers able to take advantage of political crises or political realignments. At the sectoral level, would-be reformers found few allies within the agencies responsible for forest allocation and management. At the national level, they were not well-organized to take advantage of crises and realignments. In short, the benefits of the status quo, and the costs of organization and advocacy for cost-bearers, were still so high that crises, realignments and new ideas could not catalyze reform.

The context for forest policy reform began to change during the 1980s, albeit at quite different rates and with different substantive emphases among the countries in the study. During this period, growing variations in the relative influence and resources of status quo beneficiaries and reform advocates made it possible to test the propositions on reform initiation. The evidence from this period tends to support the propositions on reform initiation. As summarized in the Introduction to Part II, the evidence shows that when status quo beneficiaries had substantial political influence and were still receiving high financial and political benefits from status quo policies, they were able to block the initiation of reforms. On the other hand, when national circumstances favored the goals of reformers and reformers also had substantial formal authority and informal influence in the policy process, reformers were almost always able to prevail. The

reform attempts in which national circumstances were not unambiguously favorable to reformers and in which both reformers and status quo beneficiaries had some political influence in the policy process show predictably mixed results.

B. Qualification of the Argument

The empirical evidence also suggests some important qualifications to the propositions. First, the reasoning behind the propositions assumed that the wealthy and powerful would prevent the poor and powerless from gaining any real benefits from valuable natural resources. In fact, though the wealthy and the powerful have unquestionably been the primary beneficiaries of status quo forest policies in all three countries, the landless poor have also benefited. Costa Rica's Agrarian Law and Institute for Agrarian Development, the Thai Interior Ministry's land settlement and village development programs, and the Philippine government's tacit acceptance of forest clearing as an alternative to land reform allowed the poorest 10 percent of their national populations to gain access to land.

True, most of the land they got was of poor quality, barely fertile enough for most farmers to earn a subsistence living from it. In addition, some of the forest land occupied by migrants was taken by force or pressure from indigenous peoples, the biggest losers in the forest sector. Nevertheless, government policies that gave informal or formal rights to occupy and use forest lands were clearly attractive to the tens of millions of migrants who helped clear the Philippine, Thai and Costa Rican forests between the end of the Second World War and the early 1980s.

The fact that the rural poor have sometimes benefited from the status quo does not invalidate the argument that the rural poor have usually faced severe collective action problems and repressive political structures. These obstacles have indeed prevented them from organizing reform movements. Government decisions to allocate some areas of degraded forest land to the landless have generally been responses to or attempts to preempt broad rural unrest. They have not been driven by well-organized movements of the rural poor seeking access to forest land. There was very limited political space in the Philippines or Thailand for the rural poor to organize without fear of repression until the late 1980s, and there was no well-organized movement for forest policy reforms until this period in either country. Costa Rica's *campesino* population has only very recently begun to organize to demand access to forest land. Costa Rica's agrarian

reform policy allowing the conversion of forest land dates from the early 1960s, a moment at which most Latin American governments undertook some land reform to pre-empt revolutionary mobilization and promote economic development (Grindle 1986: 139-43).

Ironically, the best example of organizing by the rural poor in this study is one in which the rural poor acted as status quo beneficiaries. In Thailand in the early 1980s, farmers who occupied public forest land mobilized to protest the reallocation of "their" land to commercial tree plantations. With the help of urban environmentalists and journalists, they attempted to block the establishment of new tree plantations, though with limited success.

In sum, even though the propositions tacitly assumed that the rural poor would not be status quo beneficiaries, it is clear that they have in fact benefited from *de jure* and *de facto* rights of access to forest land. It is also clear that in cases where they are aware of what they stand to lose and can form alliances with more influential actors, they can mobilize to defend the status quo. Nevertheless, the exceptional cases do not disconfirm the larger body of evidence showing that the poor face very tough collective action problems when they seek to claim or reclaim forest access and use rights.

The second qualification to the propositions is that national political figures may play as direct a role in initiating sectoral reforms as sectoral actors. The reasoning behind the propositions assumed that in forming national-sectoral alliances and proposing sectoral reforms, sectoral reformers eager to win national-level support would take the initiative. In fact, several reform episodes in the case studies show national leaders making the first move, leaving sectoral advocates scrambling to respond.

In the Philippines, the inclusion of ancestral domain guarantees for indigenous peoples in President Ramos' Social Reform Agenda pushed the DENR to accelerate the process of registering indigenous people's land claims. In Thailand, the Kor Jor Khor resettlement program initiated by the military junta, the 1993 land reform initiated by the Democrats under Prime Minister Chuan, and the 1995 attempt to broker agreement on the community forestry bill initiated by Prime Minister Banharn were clearly top-down initiatives. In Costa Rica, President Arias and his Natural Resources Minister Alvaro Umana worked closely to map strategy for the forest sector, influencing sectoral actors at least as much as they were influenced by them.

From these examples, it is clear that national leaders may sometimes see the connections between their overarching agendas and sector-specific reforms at least as clearly as sectoral advocates, and may be just as active in building alliances and in crafting the substance of reforms. Nevertheless, even when national leaders appear to be taking the initiative, they have usually been responding to prior policy developments at the sectoral level, rather than striking out in completely new directions.

II. Implications for comparative analysis of political institutions

The evidence presented here suggests that the propositions do apply across a broad range of national political institutions. From the early 1980s to the mid-1990s the Philippines managed to oust a neo-patrimonial dictator and his cronies and restore democratic institutions, though these institutions are still dominated by a small number of wealthy families. In the same period, Thailand made the transition from a bureaucratic polity to a civilian-led (if fragmented) parliamentary regime. Costa Rica experienced no dramatic change in political institutions. Its stable two-party democracy contrasted with the unsettled political institutions of the Philippines and Thailand throughout the period.

Despite the very significant differences in national political institutions, the factors most important in explaining the timing, content and success of reform initiatives were similar in all three countries. The conjuncture of favorable national circumstances with well-organized sectoral advocates and weak or weakened status quo beneficiaries helped reformers in all three countries, and influential status quo beneficiaries who had a strong financial or economic interest in the status quo were able to block reforms in all three countries.

Nevertheless, differences in national political institutions did affect the course of reform initiatives across countries. Most notably, the openness and stability of national institutions for interest representation in Costa Rica contributed to the gradual pace of forest sector reforms and to the relatively evenly balanced pursuit of economic, environmental and equity objectives.

In contrast, Thailand had opaque policy making institutions and a low level of government accountability for policy decisions through the mid-1980s. This set of institutions facilitated the development of a National Forest Policy heavily skewed toward commercial interests. Since the

late 1980s, the volatility of Thai parliamentary democracy has created conflicting policy signals in the forest sector, hindering attempts to integrate or balance potentially competing policy objectives.

In the Philippines, the Marcos regime concocted "reforms" in the forest sector as in many other sectors to mollify domestic and international critics. Under the post-Marcos democratic governments, policy making became more open and reforms more genuine, but in the forest sector as in other sectors, implementation failures raised questions about the state's capacity to challenge the country's landed oligarchy at the provincial and local level.

Differences in national political institutions clearly do influence the process and outcome of reform initiatives in the natural resource sectors. Nevertheless, they do not overwhelm the influence of sectoral factors. Costa Rica did not stand head and shoulders above the other two countries in the ratio of successful to unsuccessful reform episodes (7 successful to 2 unsuccessful for Costa Rica, versus 5 to 2 for Thailand and 9 to 4 for the Philippines). Despite the general tendency of the Thai political economy to favor the military, bureaucratic and economic elite, it is the only country in the world to have banned commercial logging. In the Philippines, the spotty record of reform implementation must be weighed against the achievement of rapid and dramatic change in the goals of forest policy, in the administrative capacity of the DENR, and in the relationships among DENR, loggers and NGOs involved in forest policy advocacy and program implementation.

Stepping back from the core argument of this dissertation, the evidence on the natural resource policy process and its outcomes in the three countries may have some relevance to broader debates on the importance of "strong states" for initiating and implementing policy reforms. From the seminal comparative works by Hirschman (1963) and Huntington (1968) on the development of state capacity to initiate reforms, through Migdal's (1987) analysis of the challenges that strong social groups present to reform-minded political leaders, to Evans' recent (1992) essay on "predatory" and "developmental" states in the structural adjustment process, a school of analysis has emerged which seeks to characterize states in terms of their capacity to initiate and sustain policy reforms that impose costs on well-organized and politically resourceful social groups.

Scholars using this framework of analysis have often characterized the Philippines as a quintessentially "weak" state, unable to use coercive authority to take land from wealthy landed families (see e.g. Putzel 1992) or to liberalize economic policies in the face of resistance from rent-seeking industrial and commercial elites (see e.g. Haggard 1990, Hutchcroft 1991). In contrast, scholars of Thai political economy have emphasized the dominance of the Thai "bureaucratic polity" over weakly organized land-owning, commercial and industrial social groups (see e.g. Riggs 1966, Girling 1981, Muscat 1994).

The evidence from this dissertation suggests that it may sometimes be useful to disaggregate the state's capacity to determine and implement policy. The Philippines may be a weak state in comparative national perspective, but the Department of Environmental and Natural Resources has a high level of formal authority over nearly half of the country's territory. Under reformist leadership and with favorable national circumstances, the DENR has been effective in changing policy and in imposing costs on powerful social groups, particularly in comparison to other national government agencies (e.g. the Department of Agrarian Reform or the Presidential Commission on Good Government) facing analogous opportunities and constraints during the same period.

In Thailand, the ability of the military and bureaucracy to control the policy process has declined rapidly since the late 1980s. Even so, the ability of an NGO coalition to achieve a ban on commercial logging in the first year of fully-elected civilian government raises questions about the relevance of the "bureaucratic polity" model to the Thai forest sector. Looking as far back as the 1960s, it is clear that the Royal Forest Department has been involved in a long, losing battle with more powerful government entities, particularly the Interior Ministry, and that it could never claim to exercise the kind of control over forests that the Interior Ministry exercised over rural settlements or that the Agriculture Ministry exercised over farmers.

To say that state "strength" varies by sector, and that an analysis of sectoral reforms can contribute to a more nuanced appreciation of the factors necessary for successful reform initiation, is not to deny the usefulness of the strong state-weak state continuum for broad cross-national comparisons. Rather, it suggests an additional and complementary approach to the analysis of the reform process, one that takes into consideration both the overarching context of national circumstances and national political institutions and the particular constellation of actors

and interests that seek to make and implement policy at the sectoral level. This approach may be a more useful tool for understanding cross-national variation in the success of sectoral reform initiatives than one that assumes a simple and direct translation of "state strength" from the national to the sectoral level. It may also be more useful than an approach that focuses so tightly on sectoral actors that it misses the constraints and opportunities created by national circumstances and actors.

III. Lessons for Developing Country Reformers

What practical lessons does this dissertation provide for those with an interest in reforming natural resource policies in developing countries? It would be foolhardy to assume that there are simple strategies for reform-mongering, and even more foolhardy to argue that the limited scope of evidence and analysis presented here can easily generalize across natural resource sectors and across countries.

Nevertheless, these cases do support some suggestions on reform strategy that have been presented by other analysts (see e.g. Hirschman 1963: Ch.5, Huntington 1968: Ch. 6, Grindle and Thomas 1991: Ch.8). Here I state the strategy of reform as a series of steps. In doing so, I may be doing a disservice to the complexity of the policy process. On the other hand, by making the lessons concrete, this restatement may serve as a rough-and-ready analytic tool for students of reform, and perhaps help reformers to develop and assess their strategies.

1. Build the base of knowledge about the costs and benefits of the status quo and their current distribution, as well as the options for reform, their costs and benefits and their potential distribution.

When Fulgencio Factoran became Secretary of the Philippine DENR, he and his team spent much of their first year in office assembling information about the status of Philippine forests and the options for forest management. This grounding in forestry facts and options served them well over the next five years, as they negotiated forest policy reforms with commercial loggers, environmental NGOs, international donors and Congressional representatives.

2. Build an advocacy coalition by informing and linking experts, advocates and representatives of cost-bearing groups in government, academia, business, the NGO community and the media.

The alliance of Thai farmers, environmental and community development NGOs, and allies in media and academia that eventually won a total ban on commercial logging took nearly five years to create. The channels for communication and coordination that began to form during the Nam Choan dam protests in 1984 were essential to the coalition's rapid mobilization and high public profile after the flash floods in 1988.

3. Broaden the potential base of elite and mass support by informing and involving current and potential sectoral and national leaders in discussions about the status quo and reform options, and by maintaining and increasing public awareness of status quo problems and reform options.

When Jose Maria Figueres won the Costa Rican Presidential election in 1994, he organized a high-profile, cabinet-level conference on sustainable development for his first day in office, and invited national political and business leaders as well as international aid agency representatives to attend. The conference immediately focused national attention on Figueres' overarching policy goal of integrating economic, environmental and social development programs, and galvanized all of his Cabinet ministers to propose actions that their ministries would take to meet this goal.

4. Pick the right proposal by advocating policy reforms that will not mobilize strong opposition from very influential members of government, the military, business community, large bilateral or international donors. Instead, begin with a proposal that will clearly benefit an organized constituency, and which stands an excellent chance of enactment if it can be brought forward at the right moment (see below).

In 1987-88, the DENR team under Factoran decided not to attempt wholesale cancellation of commercial logging permits. Instead, they focused on mobilizing financial resources for a reforestation program that would create strong national and regional constituencies in support of the DENR leadership. Only after they had built support in the Cabinet, among Congressional

representatives, with foreign donors and in the NGO community did they begin to push for much tighter restrictions on commercial logging.

5. Make the right moment by framing proposed reform(s) as a response to a "focusing event" at the sectoral and/or national level. Focusing events include dramatic and easily explained manifestations of the policy problem, political realignments that bring current or potential supporters into policy-making positions and change policy priorities; and/or national crises that demand broad and deep changes to achieve economic, environmental and/or social goals.

The Thai farmer-NGO coalition succeeded in its campaign for a commercial logging ban early in 1989 after several failed attempts. The key to the coalition's success was its ability to frame commercial logging as the cause of the deadly flash floods in the south of the country, and to present a strong argument on why a logging ban would be the best possible response. In 1986, the Costa Rican MINEREM-NGO coalition that sought to improve the management of the country's national parks linked its debt-for-nature swap proposal to the urgent objective of debt reduction. By framing debt-for-nature as a response to both a pressing national problem and a less visible set of sectoral problems, the coalition not only leveraged funds but also drew attention to the issue of parks management and the need for continued domestic funding.

6. Don't be afraid to negotiate with advocates for other goals: if you have been able to take the first five steps, you will be in a strong position to negotiate with advocates for other goals on the terms of reform proposal(s). It may be in your interest negotiate changes to proposed reforms that will make them more acceptable to those with potentially conflicting goals, if these changes build a stronger coalition and increase the likelihood that the proposed reform will pass; of course, the modified proposal must not sacrifice your strategic objectives.

When DENR and its NGO allies disagreed over an NGO proposal for a total logging ban, they negotiated hard on a compromise proposal: a ban on logging in old-growth forests. Not all NGOs supported this proposal, but it emerged as the most viable alternative to the status quo, gained broad support from the NGO community and the DENR's Congressional supporters, and was eventually passed as law by the Congress.

If reformers find that the existing knowledge base and a strong policy community (steps 1 and 2) already provide a good foundation for reform, they may want to concentrate their efforts on broadening their base and advancing their proposals (steps 3-5). On the other hand, if a reform coalition has been defeated by reform opponents, it may be worthwhile to review the entire process to see whether its members need to do additional work on one or more of the steps before their next attempt. Finally, reformers who are in the midst of tough advocacy battle against influential status quo beneficiaries may want to consider the potential risks and benefits of negotiating with rival reformers (step 6). Like litigants on the courthouse steps, rival reform coalitions may find it in their interest to negotiate a proposal that minimizes the risk of a losing political battle and is better than the status quo.

IV. Directions for Further Research

This dissertation has sought to answer the question: how can reformers in developing countries overcome substantial political and institutional barriers to the initiation of reforms in the natural resource sectors? We have seen that reformers may be able to succeed when they are able to organize cost-bearers, present a cogent case for reform, and take advantage of favorable national circumstances to win allies at the national level.

Though these findings demonstrate that reforms are achievable, and suggest conditions under which they are most likely to take place, the evidence presented in this dissertation can give only very preliminary and partial answers to two important, related questions:

- 1. Under what conditions will reforms that are initiated be successful in integrating economic, environmental and equity goals?**
- 2. Under what conditions can integrative reforms be successfully implemented?**

Chapter 2 noted that the national circumstances that make reforms possible--crises and major political realignments--often drive policy makers to focus on solving the most pressing problem or achieving the most pressing policy objective, at the expense of other goals which may be equally important from a broader or longer-term social perspective. Sectoral reformers whose

top priority goal--economic efficiency, environmental protection, or social equity--is closely aligned with the dominant goal of national leaders are tempted to seize the moment to push for their preferred policies, without seriously considering the potential negative side-effects these policies may have on the achievement of other goals. In practice, "la rage de vouloir conclure" (the phrase is Albert Hirschman's (1963: 239); a rough translation might be "the desperate desire to reach a conclusion") often leads to the enactment of single-objective reforms with unanticipated and often negative side effects on other goals.

There is ample evidence from the cases to illustrate this syndrome. In the Philippines, the Aquino administration and its DENR leadership designed the contract reforestation program in haste in 1988. The program ostensibly had two goals: to alleviate poverty and to reverse environmental degradation. In practice, the government's overriding concern with poverty alleviation dominated, and DENR policies failed to ensure that tree seedlings were selected, sited or maintained in ways that ensured their survival.

In Thailand since the mid-1980s, each dramatic shift in policy goals--from promotion of the tree plantation industry to a total ban on commercial logging to forced resettlement of upland dwellers to a massive transfer of forest lands to small farmers--brought with it negative impacts on subsidiary goals. Commercial reforestation brought commercial investors into conflict with small farmers; the logging ban imposed substantial economic costs on wood users; the forced resettlement program violated national norms of justice and failed to address the underlying social and economic problems that drove farmers to settle in fragile watersheds; the transfer of land to small farmers spurred a new round of speculative land clearing at substantial environmental cost.

During the Arias administration, the Costa Rican government's concern with environmental protection led it to downplay economic goals for the sector, imposing substantial regulatory and opportunity costs on private wood producers. Under the Calderon Administration, the reversal of policy priorities led to a stalemate between environmental advocates and private wood producers; policy uncertainty imposed indirect costs on both groups, in the form of investments not made and environmental protection measures not enacted or enforced.

Though the cases offer evidence to support the "mono-objective" theory of policy reform, the reform process does not have to end with single-goal solutions and negative side-effects. In some cases, political conditions and institutional arrangements may create incentives for

competing advocacy coalitions to expand the range of alternative policies that are considered, and to negotiate and implement reforms that meet more than one policy goal. Here I offer only an initial speculation on the conditions under which multi-objective policies might be developed, and on when they might be effectively implemented.

The theoretical basis for this speculation is straightforward. First, proponents of a reform goal will not have an incentive to negotiate with proponents of other goals unless they cannot achieve their own goal through unilateral action. Second, given the complex interaction of economic, environmental and social systems and the time needed for trade-offs and synergistic effects among these systems to appear (for forest ecosystem-human social system interactions, a minimum of several years), advocates need a trial and error process that lets them see the impact of policy on the economic, environmental and social systems they value, modify policy and try again. Third, this process must be systematic; it must allow them to vary some elements of policy while holding elements and background conditions constant.

It is possible to restate this speculation as a set of prerequisites for the development of integrative policies:

- 1) Advocacy coalitions have roughly equal political resources. Either each can effectively block the others' preferred reforms, or all must ally to overcome status quo beneficiaries.
- 2) The advocates are represented in a forum where they can continue a trial and error policy development process over time.
- 3) The forum is structured to provide opportunities for linking policy development, implementation and evaluation to create policy experiments.

If these conditions are met, advocates for potentially competing economic, environmental and social goals may be able to minimize trade-offs and maximize complementarities among these goals--thus achieving in practice the integration that proponents of "sustainable development" have been championing in theory.

The notion that iteration may be a necessary condition for integration is in sharp contrast to the idea that it is best to pursue *simultaneous* improvements in efficiency, environmental quality and equity (as suggested by e.g. Ascher and Healy 1990: Ch.8). Iteration is necessary because reformers are very unlikely to "get it all right the first time." In fact, the effort to solve everything

at once may entail such high information and transaction costs that the political window for reforms of any kind may close before anything can be enacted. Instead of seeking a one-shot comprehensive "fix," it may be preferable for reformers to create institutions for *iterated policy experimentation*, in order to promote integrative bargaining among advocates for potentially competing goals. It is important to emphasize that the institutional conditions will only make a difference if the first condition--a rough balance of power among advocates for potentially competing goals--is also met.

Beyond the first-order theorizing presented here, there is a body of theoretical and empirical evidence that indicates the value of iterated policy experimentation for the development of policies that meet multiple objectives. In the literature on policy making in developing countries, Rondinelli's (1983) work on "development projects as policy experiments," and Carley and Christie's (1992: Ch. 9) case studies of "action-centered networks" for natural resource management in developing countries both suggest that institutionalizing the participation of advocates for multiple goals, and bringing them together in a forum that links policy development, implementation and evaluation, can generate integrative policies over time. Similar findings emerge from literature on policy making in developed countries, including Holling's (1978) work on adaptive environmental management, more recent work by Jenkins-Smith and Sabatier (1993) on "policy-oriented learning" across advocacy coalitions, and Lee's (1994) recent analysis of institutions for multi-objective management of the Columbia River.

The cases examined in this dissertation also present some examples of the development of "policy-oriented learning" institutions that included advocates for multiple goals. The paradigm case may be the development of the Community Forestry Program (CFP) in the Philippines. This program is administered by the Philippine DENR, with funding from several international donor agencies. A number of regional and national NGOs (roughly 50 by 1996) have participated in the program's development and implementation.

The CFP began as an initiative of a few long-time supporters of community-based forest management who had attained positions of influence within DENR and USAID during the first years of the Aquino administration. As a pilot program, the Community Forestry Program was deliberately constructed as a quasi-experiment, with a diverse set of local sites, a set of measurable social, economic and environmental outcome criteria, and a systematic process for

data collection. At its inception, the informal policy-making group for CFP was heavily oriented toward community development, with far less representation of social or economic concerns. Over time, advocates for these concerns joined the policy making process, noted the program's environmental and economic weaknesses, and began to push for policy changes. As a result, CFP's goal statements, outcome indicators and strategies for achieving them have changed over time in ways that seek to promote all three goals (see DENR 1995; Fairman 1995; UNAC 1994).

In Thailand, the fragmentation of the policy process and the rapidly shifting political resources has generated very few examples of what might be termed policy-oriented learning institutions. The abortive attempt by the Banharn government to bring together representatives of the Royal Forest Department, NGOs committed to environmental protection and NGOs committed to obtaining forest use rights for indigenous peoples and small farmers shows the potential for this approach to work in Thailand. It also underscores the need for a more strongly institutionalized forum than the leader of a shaky parliamentary coalition can create ad hoc.

In Costa Rica, MINEREM has over time developed the capacity to bring together commercial loggers, farmers and ranchers, environmental NGOs and small farmer organizations to deal with forest management issues case by case. It is also seeking to institutionalize this capacity in the national parks system by decentralizing the management of the system and creating local governing bodies which include representatives of these interest groups. There has been less effort by MINEREM to institutionalize participation of representatives of all affected interests in national policy making. In Costa Rica's case the relative openness of existing policy institutions may reduce the need for formal institutions to ensure consideration of multiple goals in the policy process.

Even if we could determine analytically the conditions that must be met if integration is to occur, we should not expect a wave of integrative reforms to sweep the natural resource sectors of developing countries. On the contrary, when we consider that opportunities for reform of any kind are infrequent, that the conditions for integrative reform are met even more rarely, and that maintaining the process of integration through the implementation phase demands a high level of political and managerial talent from the national to the local level, we should be more than a little daunted.

This dissertation will not complete the task of exploring the conditions under which integration may take place. Its findings do encourage further research on those conditions. If it is possible to identify clear prerequisites for the integration of economic, environmental and social goals in natural resource policy, and if it is possible for political actors to meet these prerequisites through targeted investments in political and institutional change, it may also be possible to advance beyond the theoretical arguments in favor of integration toward a set of guidelines on how to achieve it in practice.

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- PC2 (DENR official involved in making and implementing policy on indigenous peoples' rights, 1993-present) 1996. Personal communication, March 7. Manila.
- PC3 (DENR senior official 1987-92; forestry consultant, 1992-present) 1995. Personal communication, February 17. Manila.
- PC4 (Forestry consultant involved in developing DENR social and community forestry programs, 1984-present) 1995. Personal communication, February 17. Manila.
- PC5 (DENR senior official involved in all aspects of forest sector policy making, 1987-92) 1995. Personal communication, November 30. Washington, D.C.
- 1996. Personal communication, February 16. Manila.
- PC6 (DENR official involved in making policy on indigenous peoples' rights, 1989-90; consultant on indigenous issues, 1990-95) 1996. Personal communication, March 12. Manila.
- PC7 (International NGO staff involved in development of social forestry programs, 1982-85) 1994. Personal communication, December 15. Washington D.C.,
- PC8 (Development Alternatives Inc. senior consultant to DENR Community Forestry Program, 1990-present), 1995. Personal communication, March 12. Manila.

PC9 (Asian Development Bank official involved in evaluating the Philippine Forestry Sector Loan) 1996. Personal communication, March 22. Manila.

PC10 (Aquino administration cabinet officer, member of Cabinet Action Committee on Land Reform, 1987) 1996. Personal communication, February 23. Manila.

PC11 (Asian Development Bank consultant providing technical assistance to Philippine forestry programs, 1994-96) 1995. Personal communication, April 6. Manila.

PC12 (Senior officer of private logging company and leading member of Philippine Wood Producers Association 1980-present) 1996. Personal communication, March 25. Manila.

PC13 (DENR official involved in drafting and implementation of Master Plan for Forestry Development, 1990-95) 1996. Personal communication, February 25. Manila.

PC14 (Senior DENR official involved in development of NIPAS legislation, 1990-92) 1996. Personal communication, February 20. Manila.

PC15 (Asian Development Bank official involved in ADB loan appraisal mission for Philippines Forestry Sector Program Loan, 1987-88) 1996. Personal communication, March 23, Manila.

PC16 (World Bank official involved in development of Environment and Natural Resources Sector Loan to the Philippines, 1988-92) 1994. Personal communication, November 1. Washington, D.C.

Interviews for Chapter 5 (Thailand)

PC1 (Head of leading Thai community development NGO) 1996. Personal communication, April 8. Bangkok.

PC2 (Professor of forestry and consultant to Royal Forest Department on land use planning, 1985-present) 1996. Personal communication, April 19. Bangkok.

PC3 (Professor of forestry 1978-present and consultant to National Forest Policy Committee, 1984-90). Personal communication, January 28. Bangkok.

PC4 (Senior staff person at Thai non-government research organization and participant in community forestry negotiations, 1996) 1996. Personal communication, May 7. Bangkok.

PC5 (Head of leading Thai environmental NGO) 1996. Personal communication, January 31. Bangkok.

PC6 (Thai cabinet official, 1991-92) 1996. Personal communication, April 29. Bangkok.

PC7 (Senior staff in Forest Land Management Division, Royal Forest Department, 1979-93) 1996. Personal communication, February 1. Bangkok.

PC8 (Professor of economics and advisor to RFD on Kor Jor Khor program, 1991-92) 1996. Personal communication, January 30. Bangkok.

PC9 (Senior civil servant and participant in National Forest Policy Committee, 1984-92) 1996. Personal communication, April 18. Bangkok.

PC10 (Senior staff, Planning and Research Office, Agrarian Land Reform Office, 1990-present) 1996. Personal communication, April 30. Bangkok.

PC11 (Senior staff of Thai environmental NGO and participant in community forest policy negotiations, 1994-present) 1996. Personal communication, May 1. Bangkok.

PC12 (Head of community forestry NGO and consultant on community forestry in Thailand, 1975-present) 1996. Personal communication, April 12. Bangkok.

PC13 (Senior RFD official, 1981-91) 1996. Personal communication, April 26. Bangkok.

PC14 (Professor of geography and consultant to RFD on community forestry 1989-present) 1996. Personal communication, January 29. Chiang Mai.
PC15 (International aid agency and NGO representative and consultant on social forestry programs in Thailand, 1978-present). Personal communication, January 21. Chiang Mai.

Interview for Chapter 6 (Costa Rica)

CRPC (Personal communication) 1997. International aid agency official responsible for assessing forest sector policies in Costa Rica. Washington, D.C., December 14.

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